OFFERING CIRCULAR SUPPLEMENT
(To Offering Circular dated October 17, 1989)

$4,000,000,000

Tennessee Valley Authority

$1,500,000,000 8¼% POWER BONDS 1989 SERIES F DUE 1996
$2,500,000,000 8⅝% POWER BONDS 1989 SERIES G DUE 2029

Interest payable May 15 and November 15

The Series F Bonds will not be subject to redemption prior to maturity. The Series G Bonds offered hereby will be redeemable, in whole only, on not less than 30 days' notice at any time on or after November 15, 1999 at the option of Tennessee Valley Authority ("TVA") at the applicable redemption prices set forth herein, together with accrued interest to the date fixed for redemption.

TVA is a wholly owned corporate agency and instrumentality of the United States of America. Principal and interest will be payable solely from TVA's Net Power Proceeds as herein defined.

THE POWER BONDS 1989 SERIES F AND SERIES G (COLLECTIVELY, THE "BONDS") WILL NOT BE OBLIGATIONS OF, NOR WILL PAYMENT OF THE PRINCIPAL THEREOF OR THE INTEREST THEREON BE GUARANTEED BY, THE UNITED STATES OF AMERICA. THE BONDS ARE NOT REQUIRED TO BE REGISTERED UNDER THE SECURITIES ACT OF 1933. ACCORDINGLY, NO REGISTRATION STATEMENT HAS BEEN FILED WITH THE SECURITIES AND EXCHANGE COMMISSION. TVA IS NOT SUBJECT TO THE PERIODIC REPORTING REQUIREMENTS OF THE SECURITIES EXCHANGE ACT OF 1934.

	Price to Public (1)	Underwriting Discounts and Commissions (2)	Proceeds to TVA (1) (3)
Per 1989 Series F Bond	*99.450%*	*.575%*	*98.875%*
Total	*$1,491,750,000*	*$8,625,000*	*$1,483,125,000*
Per 1989 Series G Bond	*95.900%*	*.625%*	*95.275%*
Total	*$2,397,500,000*	*$15,625,000*	*$2,381,875,000*

(1) Plus accrued interest, if any, from November 30, 1989 to date of delivery.
(2) TVA has agreed to indemnify the several Underwriters against certain liabilities.
(3) Before deducting expenses payable by TVA estimated at $400,000.

The Bonds are offered, subject to prior sale, when, as and if accepted by the Underwriters named herein and subject to approval of certain legal matters by Mudge Rose Guthrie Alexander & Ferdon, counsel for the Underwriters. It is expected that delivery of the Bonds, in book-entry form, will be made through the book-entry system of the Federal Reserve Banks on or about November 30, 1989, against payment therefor in immediately available funds.

MORGAN STANLEY & CO.
Incorporated

THE FIRST BOSTON CORPORATION

GOLDMAN, SACHS & CO.

MERRILL LYNCH CAPITAL MARKETS

SALOMON BROTHERS INC

SHEARSON LEHMAN HUTTON INC.

November 17, 1989

No dealer, salesman or other person has been authorized to give any information or to make any representations not contained in this Offering Circular Supplement and the Offering Circular dated October 17, 1989 (the "Offering Circular") incorporated by reference herein, and, if given or made, such information or representation must not be relied upon as having been authorized by TVA or the Underwriters. This Offering Circular Supplement and the Offering Circular do not constitute an offer to sell or a solicitation of any offer to buy any of the securities offered hereby in any jurisdiction to any person to whom it is unlawful to make such offer in such jurisdiction. The delivery of this Offering Circular Supplement and the Offering Circular at any time does not imply that the information given herein or therein is correct at any time subsequent to its date.

This Offering Circular Supplement should be read in conjunction with the accompanying Offering Circular which is incorporated herein by this reference. Any statement contained in the Offering Circular shall be modified or superseded for all purposes of the Offering Circular and this Offering Circular Supplement to the extent that a statement contained in this Offering Circular Supplement modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of the Offering Circular. Additional copies of this Offering Circular Supplement and the Offering Circular may be obtained upon request directed to Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902, Attention: Treasurer.

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Offering Circular Supplement

Offering Circular

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE BONDS OFFERED HEREBY AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZATION, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

SUMMARY OF OFFERING

The information below is qualified in its entirety by the detailed information appearing in the Offering Circular and elsewhere in this Offering Circular Supplement. Capitalized terms used and not defined herein have the meanings defined in the Offering Circular and elsewhere in this Offering Circular Supplement.

Issuer ..... Tennessee Valley Authority is a wholly owned corporate agency and instrumentality of the United States of America established by the Tennessee Valley Authority Act of 1933, to develop the resources of the Tennessee Valley and adjacent areas in order to strengthen the regional economy and the national defense.

Securities Offered ..... $1,500,000,000 aggregate principal amount of 8¼% Power Bonds 1989 Series F, due November 15, 1996.

$2,500,000,000 aggregate principal amount of 8⅝% Power Bonds 1989 Series G, due November 15, 2029.

Interest ..... The Bonds will bear interest from November 30, 1989, at the respective annual rates set forth on the cover page hereof, payable semi-annually in arrears on each May 15 and November 15, commencing May 15, 1990.

Redemption ..... The Series F Bonds will not be subject to redemption prior to maturity. The Series G Bonds may be redeemed at TVA's option, in whole only, at any time on or after November 15, 1999 at the applicable redemption prices set forth herein plus accrued interest, if any, to the date fixed for redemption.

Fiscal Agent ..... Federal Reserve Banks.

Form of Bonds ..... The Bonds will be issued and maintained and may be transferred by Holders (as defined below) only on the book-entry system of the Federal Reserve Banks. The Bonds may be held of record only by entities eligible to maintain book-entry accounts with a Federal Reserve Bank. Such entities whose names appear on the book-entry records of a Federal Reserve Bank as the entities for whose accounts Bonds have been deposited are herein referred to as "Holders". A Holder is not necessarily the beneficial owner of a Bond. Beneficial owners will ordinarily hold Bonds through one or more financial intermediaries, such as banks, brokerage firms and securities clearing organizations. Bonds will be issued and must be maintained and transferred in minimum denominations of $1,000 and integral multiples thereof.

Use of Proceeds ..... The net proceeds from the sale of the Bonds will be used for effecting an in-substance defeasance or refunding of an aggregate of approximately $3.5 billion principal amount of certain Power Bonds held by the Federal Financing Bank. See "Use of Proceeds".

Source of Payment ..... The Bonds are payable solely from Net Power Proceeds and are not obligations of, or guaranteed by, the United States. See "The Basic Resolution; Power Bonds" in the Offering Circular.

Taxation ..... Interest on the Bonds is subject to federal income taxation. Under the Act, the Bonds are exempt as to principal and interest from all taxation now or hereafter imposed by any state or local taxing authority except estate, inheritance and gift taxes. See "Tax Matters".

Legality of Investment ..... The Bonds described herein:

- are acceptable as security for all fiduciary, trust, and public funds, the investment or deposit of which shall be under the authority or control of any officer or agency of the United States;

	• are eligible as collateral for Treasury tax and loan accounts; • are among those securities which national banks may deal in, underwrite and purchase for their own accounts up to 10% of unimpaired capital and surplus; • are eligible as collateral for advances by Federal Reserve Banks to depository institutions; • are legal investments for federal savings and loan associations and federal savings banks; • are "liquid assets" for federal savings and loan associations, federal savings banks and other Federal Home Loan Bank members, provided five years or less remain until maturity; • are eligible as collateral for advances by Federal Home Loan Banks for which the Bonds are legal investments; and • are legal investments for federal credit unions. See "Legality of Investment".
CUSIP Numbers	Series F: 880591 BC5 Series G: 880591 BD3

TENNESSEE VALLEY AUTHORITY

TVA is a wholly owned corporate agency and instrumentality of the United States established pursuant to the Tennessee Valley Authority Act of 1933, as amended (the "Act"). Its objective is to develop the resources of the Tennessee Valley region in order to strengthen the regional and national economy and the national defense. The programs of TVA consist of power and non-power programs. The Act authorizes TVA to issue Evidences of Indebtedness (as such term is defined under "Description of Bonds") that may only be used to finance its power program.

USE OF PROCEEDS

The net proceeds from the sale of the Bonds offered hereby will be used principally to effect an in-substance defeasance or refunding of an aggregate of approximately $3.5 billion principal amount of Power Bonds (as such term is defined under "Description of Bonds"), including up to $500 million in short-term Power Bonds, held by the Federal Financing Bank ("FFB") based on an assumed average yield on the portfolio of securities used to defease certain of the long-term Power Bonds. See "Status of Refinancing Plan" herein and "The Refinancing Plan and Use of Proceeds" in the Offering Circular.

RECENT DEVELOPMENTS

Recent Financial Results

The following selected financial data of TVA's power program for fiscal 1988 has been derived from TVA's audited financial statements. Data for fiscal 1989 is derived from unaudited financial statements which, in the opinion of management of TVA, include all adjustments (consisting only of normal recurring adjustments) necessary for the fair presentation of results for such period. The data below should be read in conjunction with the financial statements and notes thereto presented in the Offering Circular.

	Fiscal Year Ended September 30	
	1989 (Unaudited)	1988
Power Earnings Data	(Dollars in Millions)	
Operating Revenues	$5,287	$5,322
Operating Expenses	3,203	3,450
Operating Income	2,084	1,872
Other Income and Deductions	61	(155)
Income Before Interest Charges	2,145	1,717
Interest Expense	1,842	1,829
Allowance for Funds Used During Construction	(256)	(525)
Net Interest Charges	1,586	1,304
Net Power Income	$ 559	$ 413
Ratio of Earnings to Fixed Charges (Unaudited)[1]	1.30	1.23

[1] Ratio of Earnings to Fixed Charges is calculated by dividing Net Power Income plus Interest Charges by Interest Charges.

Results of Operations

Net income for fiscal 1989 (unaudited) increased $146 million or 35 percent compared to fiscal 1988. The increase was due primarily to TVA's cost reduction program. Operating income (unaudited) increased $212 million to $2.084 billion compared to fiscal 1988.

Operating revenues in fiscal 1989 (unaudited), the first year that TVA held electric rates constant in the current cost reduction program, were $5.287 billion, down $35 million from fiscal 1988. Kilowatt-hour sales increased 2 percent, but the effect of this increase on revenues was more than offset by an increase in the proportion of lower cost, non-firm power sales to industrial customers.

Operating expenses decreased substantially in fiscal 1989 (unaudited), compared to 1988, down $247 million to $3.203 billion, the lowest level since 1986. Excluding the effects of the amortization of loss on cancelled nuclear generating units, operating expenses were down $493 million compared to 1988. The lower operating expenses resulted primarily from reduced labor and purchased power costs.

Status of Refinancing Plan

On October 24, 1989, TVA issued and sold $4 billion aggregate principal amount of its Power Bonds consisting of $1,000,000,000 aggregate principal amount of 8¼% Power Bonds 1989 Series C, due October 1, 1994, $1,000,000,000 aggregate principal amount of 8⅜% Power Bonds 1989 Series D, due October 1, 1999 and $2,000,000,000 aggregate principal amount of 8¾% Power Bonds 1989 Series E, due October 1, 2019. The net proceeds from the sale of such Power Bonds were used to effect an in-substance defeasance of approximately $3.4 billion principal amount of high coupon Power Bonds as set forth in the following table. This will result in annual interest savings of $74 million.

Bond Issue	Amount Refinanced (Millions)	Coupon	Call Premium At First Call Date	First Call Date
1980B	$500	12.955%	7.670%	March 31, 1990
1981A	500	12.735%	8.420%	March 31, 1991
1981B	500	12.925%	8.540%	April 30, 1991
1981C	500	13.255%	8.760%	June 30, 1991
1981E	550	13.035%	8.620%	December 31, 1991
1982A	700	13.565%	8.970%	April 30, 1992
1982B	150	13.575%	8.970%	May 31, 1992

The net proceeds from the sale of the Bonds offered hereby will be used principally to effect an in-substance defeasance or refunding of an aggregate of approximately $3.5 billion principal amount of Power Bonds, including up to $500 million in short-term Power Bonds. If market conditions improve, it may become economical to refinance additional Power Bonds held by the FFB.

Pursuant to the letter of intent described under "The Refinancing Plan and Use of Proceeds" in the Offering Circular, TVA entered into an agreement with the FFB in November 1989. This agreement, which expires in October 1991, unless extended, provides for the issuance and sale by TVA to the FFB of up to $2 billion of Power Bonds at any time outstanding with maturities of up to six months.

At November 16, 1989, TVA had outstanding $774 million of short-term debt (including short-term Power Bonds held by FFB). TVA may refinance such short-term debt with long-term Power Bonds from time to time in light of market conditions and other factors.

Power Contract and Other Matters

TVA recently developed arrangements whereby TVA and participating distributors make monthly bill credits available for new and expanded general power loads which exceed 1,000 kW. In order to participate, a distributor must execute an agreement which includes an amendment to the provisions

relating to the term of the wholesale power contract. Under the amendment, beginning after 10 years of a 20-year initial term, the contract automatically extends for an additional 1-year renewal term each year. Either party may terminate the contract at any time upon not less than 10 years' notice. Of the 160 distributors of TVA power, 88 had signed such an agreement as of November 14, 1989, including Nashville, Tennessee, which is one of the five largest distributors served by TVA. Any wholesale power contracts entered into in the future will contain a comparable provision.

A federal agency has withheld for later payment $58 million of a $311 million payment due to TVA in October 1989. See Note 13 of Notes to Financial Statements. The federal agency has advised that the withholding is necessitated by a recent sequestration under the Balanced Budget and Emergency Deficit Control Act of 1985, as amended (Gramm-Rudmann-Hollings). TVA is in discussions with representatives of this agency and believes that the $58 million will be paid. The customer is required to pay interest on any unpaid amounts under the terms of the agreement between the customer and TVA.

Although the date to load fuel in Unit One of TVA's Watts Bar Nuclear Plant is under review and uncertain at this time, TVA believes its plan to bring the unit into commercial operation in the fourth quarter of 1991 is still achievable. However, due to numerous uncertainties, no assurance can be given that delays in bringing the unit into operation will not occur.

DESCRIPTION OF BONDS

General

The Bonds are to be issued pursuant to authority vested in TVA by the Act and pursuant to the Basic Tennessee Valley Authority Power Bond Resolution adopted on October 6, 1960, as amended on September 28, 1976 and October 17, 1989 (the "Basic Resolution"), and the Supplemental Resolution authorizing the Bonds adopted on November 16, 1989 (the "Supplemental Resolution" and together with the Basic Resolution, the "Resolutions"). TVA has entered into a Fiscal Agency Agreement dated as of October 17, 1989 (the "Fiscal Agency Agreement"), with the Federal Reserve Banks, as fiscal agents (together, the "Fiscal Agent"). The Secretary of the Treasury has approved the time of issuance of, and the maximum rate of interest to be borne by, the Bonds in compliance with Section 15d of the Act. The Bonds represent obligations of TVA payable solely from TVA's Net Power Proceeds and are not obligations of, or guaranteed by, the United States.

The summaries herein of certain provisions of the Act, the Resolutions and the Fiscal Agency Agreement do not purport to be complete and are qualified in their entirety by reference to all the provisions of the Act, the Resolutions and the Fiscal Agency Agreement, copies of which may be obtained upon request directed to Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902, Attention: Treasurer.

The Act authorizes TVA to issue and sell bonds, notes and other evidences of indebtedness (hereinafter collectively referred to as "Evidences of Indebtedness") to assist in financing its power program and to refund such Evidences of Indebtedness. Evidences of Indebtedness issued pursuant to Section 2.2 of the Basic Resolution designated as Tennessee Valley Authority Power Bonds are hereinafter referred to as "Power Bonds". The aggregate amount of Evidences of Indebtedness at any one time outstanding is limited to $30 billion. At November 16, 1989, as adjusted to give effect to the offering made hereby, there was outstanding $26.9 billion principal amount of Evidences of Indebtedness.

The Bonds will be Power Bonds as defined above and will be payable as to both principal and interest solely from TVA's Net Power Proceeds, which are defined as the remainder of TVA's Gross Power Revenues (as defined in the Basic Resolution) after deducting the costs of operating, maintaining, and administering its power properties (including multiple-purpose properties in the proportion that multiple-purpose costs are allocated to power) and payments to states and counties in lieu of taxes, but before deducting depreciation accruals or other charges representing the amortization of capital expenditures, plus the net proceeds of the sale or other disposition of any Power Facility (as defined

in the Basic Resolution) or interest therein. See "Certain Provisions of The Tennessee Valley Authority Act—Payments to the Treasury" in the Offering Circular. TVA had Net Power Proceeds of $2.8 billion, $2.5 billion and $2.3 billion for each of the three fiscal years ended September 30, 1989, 1988 and 1987, respectively. Interest requirements in each such period were $1.8 billion, $1.8 billion and $1.7 billion, respectively. The Act also requires TVA to make certain payments into the Treasury each year from Net Power Proceeds in excess of those required for debt service as a return on and reduction of the Appropriation Investment.

The Bonds will rank equally as to the application of Net Power Proceeds with other Power Bonds. As to the application of Net Power Proceeds, Power Bonds rank senior to other Evidences of Indebtedness as to principal and on a parity with or senior to other Evidences of Indebtedness as to interest. For a further discussion of the application of Net Power Proceeds, see "The Basic Resolution; Power Bonds—Application of Net Power Proceeds" in the Offering Circular. There is no limit on other indebtedness or securities which may be issued by TVA and no financial or similar restrictions on TVA, except as provided under the Act, the Basic Resolution and the Supplemental Resolution. See "The Basic Resolution; Power Bonds" in the Offering Circular.

The Supplemental Resolution provides that, at the option of TVA, additional Power Bonds of each series offered hereby may be issued in one or more future installments pursuant to an amendment to the Supplemental Resolution not requiring the consent of holders of Power Bonds. New Power Bonds of any series offered hereby so issued shall be identical in all respects with the Bonds of such series offered hereby.

Bankers Trust Company, New York, New York presently acts as trustee (the "Trustee") for holders of Power Bonds under the Basic Resolution. However, the Basic Resolution has been amended to eliminate the Trustee. This amendment will become effective in the future after certain conditions are met. See "Amendments to the Basic Resolution to Become Effective in the Future". Bankers Trust Company is also participating as an Underwriter of the Bonds.

Payment of Principal and Interest

The Bonds will consist of $1,500,000,000 aggregate principal amount of 8¼% Power Bonds 1989 Series F, due November 15, 1996 and $2,500,000,000 aggregate principal amount of 8⅝% Power Bonds 1989 Series G, due November 15, 2029 (each such maturity date being hereinafter referred to as a "Maturity Date"). The Bonds will be issued in minimum denominations of $1,000 and integral multiples thereof in book-entry form only through the Federal Reserve Banks as described below under "Book-Entry System". Interest, at the rate per annum for each respective series, will be payable semi-annually in arrears on May 15 and November 15 (each an "Interest Payment Date") commencing May 15, 1990. Such interest payments will include interest accrued from and including November 30, 1989 or the preceding Interest Payment Date, as the case may be, to but excluding the relevant Interest Payment Date. Interest shall be computed on the basis of a 360-day year of twelve 30-day months. The principal amount of each series of Bonds, together with the interest accrued and unpaid thereon, is due in full on each respective Maturity Date. Payments of principal and interest on the Bonds will be made on the applicable payment dates to Holders (as such term is defined under "Book-Entry System") of the Bonds which are Holders as of the close of business on the Business Day preceding such payment dates, by credit of the payment amount to the Holders' accounts at the Federal Reserve Banks. The Holder and each other financial intermediary in the chain to the beneficial owner will have the responsibility of remitting payments for the accounts of their customers.

In any case in which an Interest Payment Date or the Maturity Date is not a Business Day, payment of interest or principal, as the case may be, shall be made on the next succeeding Business Day with the same force and effect as if made on such Interest Payment Date or the Maturity Date. The term "Business Day" shall mean any day other than a Saturday or Sunday or a day on which banking institutions in New York City are authorized or required by law or executive order to be closed.

Redemption

The Series F Bonds will not be subject to redemption prior to maturity.

The Series G Bonds are subject to redemption upon not less than 30 days' notice broadcast to each Holder on the book-entry system of the Federal Reserve Banks, at any time on or after November 15, 1999, as a whole only, at the election of TVA, at a Redemption Price equal to the percentage of the principal amount set forth below if redeemed during the 12-month period ending November 14 of the years indicated:

Year	Redemption Price	Year	Redemption Price
2000	106.161	2013	102.957
2001	105.914	2014	102.711
2002	105.668	2015	102.464
2003	105.421	2016	102.218
2004	105.175	2017	101.971
2005	104.929	2018	101.725
2006	104.682	2019	101.479
2007	104.436	2020	101.232
2008	104.189	2021	100.986
2009	103.943	2022	100.739
2010	103.696	2023	100.493
2011	103.450	2024	100.246
2012	103.204		

and thereafter at a Redemption Price equal to 100% of the principal amount, together in each case with accrued interest to the Redemption Date.

Book-Entry System

The Bonds will be issued and maintained and may be transferred only on the book-entry system of the Federal Reserve Banks, in minimum principal amounts of $1,000 and integral multiples thereof.

The Federal Reserve Banks will issue the Bonds in book-entry form and will maintain book-entry accounts with respect to the Bonds and make payments, on behalf of TVA, of interest on and principal of the Bonds on the applicable payment dates by crediting Holders' accounts at the Federal Reserve Banks.

The foregoing paragraph is a summary of certain provisions of the Fiscal Agency Agreement, and does not purport to be a complete statement of all the provisions of such agreement.

Regulations governing the use of the book-entry system for the Bonds are contained in 54 Fed. Reg. 42,456 (to be codified at 18 C.F.R. Part 1314), and such procedures, insofar as applicable, as may from time to time be established by regulations of the United States Treasury Department governing obligations of the United States Treasury, as now contained in Treasury Department Circular No. 300. These regulations and procedures relate primarily to the registration, transfer, exchange and pledge of such obligations. A copy of Circular No. 300 may be obtained upon request from any Federal Reserve Bank, the Treasury Department or TVA. The accounts of holders on the Federal Reserve Banks' book-entry system are governed by applicable operating circulars and letters of the Federal Reserve Banks.

The Bonds may be held of record only by entities eligible to maintain book-entry accounts with the Federal Reserve Banks. Such entities whose names appear on the book-entry records of a Federal Reserve Bank as the entities for whose accounts the Bonds have been deposited are herein referred to as "Holders". A Holder is not necessarily the beneficial owner of a Bond. Beneficial owners will ordinarily hold Bonds through one or more financial intermediaries, such as banks, brokerage firms

and securities clearing organizations. A Holder that is not the beneficial owner of a Bond, and each other financial intermediary in the chain to the beneficial owner, will have the responsibility of establishing and maintaining accounts for their respective customers. The rights of the beneficial owner of a Bond with respect to TVA and the Federal Reserve Banks may be exercised only through the Holder thereof. TVA and the Federal Reserve Banks will have no direct obligation to a beneficial owner of a Bond that is not also the Holder of such Bond. The Federal Reserve Banks will act only upon the instructions of Holders in recording transfers of the Bonds.

Events of Default

Any of the following shall be deemed an Event of Default under the Basic Resolution: (i) default in the payment of the principal or redemption price of any Power Bond when due and payable at maturity, by call for redemption, or otherwise; (ii) default in the payment of any installment of interest on any Power Bond when due and payable for more than 30 days; or (iii) failure of TVA to duly perform any other covenant, condition or agreement contained in the Power Bonds or in the Basic Resolution or any Supplemental Resolution for 90 days after written notice specifying such failure has been given to TVA by the Trustee or to TVA and the Trustee by the holders of at least 25% in aggregate principal amount of the then outstanding Power Bonds.

Upon any such Event of Default, the Trustee or the holders of the Power Bonds may proceed to protect and enforce their respective rights, subject to the restrictions described below. The Trustee shall, subject to certain restrictions, have the right and power to institute a proceeding (i) to enforce TVA's covenants and agreements, (ii) to enjoin any acts in violation of the rights of holders of Power Bonds, and (iii) to protect and enforce the rights of holders of Power Bonds and the Trustee. Power Bonds do not provide for acceleration upon an Event of Default.

The Trustee has no right to bring any such action or proceeding against TVA unless the Trustee has previously determined in good faith that there exists, and has given TVA written notice of, an Event of Default, and TVA has had a reasonable opportunity to take appropriate corrective action with respect thereto and has failed or refused to do so.

No holder of any Power Bond shall have the right to bring any judicial proceeding against TVA for enforcement of any provision of the Basic Resolution or any Supplemental Resolution, or for any remedy, unless (i) such holder shall have previously given TVA and the Trustee written notice of the existence of an Event of Default, (ii) the holders of at least 25% in aggregate principal amount of the then outstanding Power Bonds, or their duly authorized representative or representatives, shall have made written request, and offered reasonable indemnity, to the Trustee to institute such proceeding as trustee, (iii) the Trustee shall not have received a direction inconsistent with such request from the holders of a majority in aggregate principal amount of the outstanding Power Bonds, and (iv) the Trustee shall have failed to institute such proceeding within 120 days after receipt of such written notice. However, such limitations do not apply to an action instituted by a holder of a Power Bond for the enforcement of payment of the principal of and redemption price overdue and unpaid, if any, or interest on such Power Bond on or after the respective due dates expressed in such Supplemental Resolution.

Holders of a majority in aggregate principal amount of the outstanding Power Bonds have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee and may waive any default and its consequences, except a default in the payment of the principal of, premium, if any, or interest on any Power Bonds.

Amendments to the Basic Resolution to Become Effective in the Future

On October 17, 1989 TVA adopted a resolution amending the Basic Resolution, entitled "Third Amendatory Resolution to Basic Tennessee Valley Authority Power Bond Resolution" (the "Third Amendatory Resolution"). The amendments to the Basic Resolution made by the Third Amendatory Resolution will become effective only at such time as either (a) all Power Bonds issued prior to the date of adoption of the Third Amendatory Resolution cease to be outstanding under the Basic

Resolution or (b) the holders of all the outstanding Power Bonds issued prior to the date of adoption of the Third Amendatory Resolution consent in writing to such amendments. At such time as the amendments become effective, they shall apply to all Power Bonds, including the Bonds. TVA presently intends to seek the consent of the FFB at such time as all presently outstanding Power Bonds other than those owned by the FFB are no longer outstanding under the Basic Resolution, with such amendments becoming effective upon the giving of such consent. The holders of the Bonds offered hereby shall be deemed to have given their consent to the effect that, at any time after the conditions set forth in (a) or (b) above have been met, the Basic Resolution amendments will become effective in the manner provided above. No further vote or consent of the holders of Bonds offered hereby is required to permit such amendments to the Basic Resolution to become effective.

The Third Amendatory Resolution, when effective in accordance with its terms and the terms of the Basic Resolution as described above, will eliminate the requirement for a trustee, and will remove from or modify all provisions in the Basic Resolution relating to the trustee. The Basic Resolution, as so amended, will not require that a trustee serve as such thereunder, but will provide for the appointment of a transfer agent and paying agent with respect to each series of Power Bonds issued thereunder in certificated form, and for the appointment of a Fiscal Agent with respect to each series of Power Bonds issued thereunder in book-entry form. The Basic Resolution, as so amended, will permit TVA to serve as transfer agent or paying agent. The Fiscal Agents, transfer agents and paying agents will not be responsible for enforcing any rights or remedies of holders of the Power Bonds under the Basic Resolution, as is now the case with the Trustee.

The Basic Resolution as so amended by the Third Amendatory Resolution will give to Holders of 5% in aggregate principal amount of the then outstanding Power Bonds the right to give notices of default to, and bring judicial proceedings against, TVA, which rights are presently lodged in the Trustee and the holders of 25% in aggregate principal amount of the outstanding Power Bonds, as described in the first four paragraphs under "Events of Default".

The Basic Resolution as so amended will also permit TVA, in addition to the amendments permitted by the Basic Resolution as described under "The Basic Resolution; Power Bonds—Modifications of Resolutions and Outstanding Bonds" in the Offering Circular, to amend the Basic Resolution or any Supplemental Resolution without the consent of any holders of Power Bonds in order to make any other modification or amendment which the Board by resolution determines will not materially and adversely affect the interests of holders of Power Bonds.

The foregoing is a brief summary of certain provisions of the Third Amendatory Resolution. This summary is not to be considered a full statement of the terms of the Third Amendatory Resolution and, accordingly, is qualified by reference to the Third Amendatory Resolution. Copies in reasonable quantity of the Third Amendatory Resolution may be obtained upon request directed to Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902, Attention: Treasurer.

TAX MATTERS

The following discussion describes certain United States federal (and state and local, where specifically noted) income and estate tax consequences of the ownership of the Bonds, without consideration of the particular facts and circumstances of each beneficial owner's situation. The discussion addresses only persons who will hold the Bonds as capital assets and does not address taxpayers subject to special tax regimens or special tax situations, such as a dealer in securities. In addition, the rules described below and their application to the Bonds are subject to change. Each prospective beneficial owner is urged to consult its own tax advisor with respect to United States federal and state income tax consequences of holding a Bond, as well as any consequences arising under the laws of any other taxing jurisdiction.

For purposes of this discussion, "U.S. Person" means a citizen or resident of the United States, or a corporation or partnership organized in or under the laws of the United States or any political

subdivision thereof or an estate or trust the income of which is includible in gross income for United States tax purposes regardless of its source. The term "U.S. beneficial owner" includes any U.S. Person which is a beneficial owner of a Bond and any person which is a beneficial owner of a Bond to the extent that the income attributable to such Bond is effectively connected with the person's conduct of a United States trade or business.

U.S. beneficial owners

A U.S. beneficial owner is subject to federal income taxation on interest on a Bond, and there is no special exemption for a Bond from federal estate and gift tax. The Act, however, provides that the Bonds are exempt both as to principal and interest from all taxation now or hereafter imposed by any state or local taxing authority except estate, inheritance and gift taxes. This exemption might not extend to franchise or other nonproperty taxes in lieu thereof imposed on corporations or to gain or loss realized upon the sale or exchange of a Bond.

Upon a sale or exchange of a Bond, a U.S. beneficial owner generally will recognize capital gain or loss equal to the difference between the amount realized on the sale or exchange and the beneficial owner's adjusted basis for the Bond.

If a U.S. beneficial owner purchases a Bond for less than its stated redemption price at maturity, in general, that difference will be market discount (unless the discount is less than 1/4 of 1% of the stated redemption price at maturity of the Bond multiplied by the number of complete years remaining to maturity). In general, under the market discount rules, unless the U.S. beneficial owner elects to accrue market discount in income currently, any gain on a disposition of a market discount Bond will be ordinary income to the extent of accrued market discount, and deductions for a portion of the interest on any indebtedness incurred or continued to purchase or carry the Bond may be deferred.

A U.S. beneficial owner who purchases a Bond for an amount greater than the amount payable at maturity of the Bond may elect to amortize the bond premium. In the case of a U.S. beneficial owner that makes an election to amortize bond premium or has previously made an election that remains in effect, amortizable bond premium on a Bond generally will be treated as a reduction of the interest income on a Bond on a constant yield basis (except to the extent regulations may provide otherwise) over the term of the Bond. The basis of a debt obligation purchased at a premium is reduced by the amount of amortized bond premium. An election to amortize bond premium will apply to certain other debt instruments acquired at a premium by a U.S. beneficial owner and may have different tax consequences depending on when the debt instruments were issued or acquired. A U.S. beneficial owner should consult a tax advisor before making that election.

Non-U.S. beneficial owners

A non-U.S. beneficial owner will not be subject to United States federal income taxation on interest on a Bond. To qualify for the exemption from taxation, the last U.S. Person in the chain of payment prior to payment to a non-U.S. beneficial owner (the "Withholding Agent") must have received in the year in which a payment of interest or principal occurs, or in either of the two preceding years, a statement that (i) is signed by the beneficial owner under penalties of perjury, (ii) certifies that such owner is not a U.S. beneficial owner, and (iii) provides the name and address of the beneficial owner. The statement may be made on an Internal Revenue Service Form W-8 or substantially similar substitute form and the beneficial owner must inform the Withholding Agent of any change in the information on the statement within 30 days of such change. If a Bond is held through a securities clearing organization or certain other financial institutions, the organization or institution may provide a signed statement to the Withholding Agent. However, in such case, the signed statement must be accompanied by a copy of a Form W-8 or substitute form provided by the beneficial owner to the organization or institution holding the Bond on behalf of the beneficial owner.

Generally, any amount which constitutes capital gain to a non-U.S. beneficial owner upon retirement or disposition of a Bond will not be subject to federal income taxation in respect of such amount. Certain exceptions may be applicable and an individual non-U.S. beneficial owner should consult a tax advisor.

The Bonds will not be includible in the estate of a non-U.S. beneficial owner.

Backup Withholding

Backup withholding of United States federal income tax at a rate of 20% may apply to payments made in respect of the Bonds to beneficial owners who are not exempt recipients and who fail to provide certain identifying information (such as the beneficial owner's taxpayer identification number) in the manner required. Generally, individuals are not exempt recipients, whereas corporations and certain other entities generally are exempt recipients. Payments made in respect of the Bonds to a U.S. beneficial owner must be reported to the United States Internal Revenue Service, unless such U.S. beneficial owner is an exempt recipient or establishes an exemption. Compliance with the identification procedures (described in the preceding section) would establish an exemption from backup withholding for those non-U.S. beneficial owners who are not exempt recipients.

In addition, upon the sale of a Bond to (or through) a broker, the broker must withhold 20% of the entire purchase price, unless either (i) the broker determines that the seller is a corporation or other exempt recipient or (ii) the seller provides, in the required manner, certain identifying information and, in the case of a non-U.S. beneficial owner, certifies that such seller is a non-U.S. beneficial owner (and certain other conditions are met). Such a sale must also be reported by the broker to the United States Internal Revenue Service, unless either (i) the broker determines that the seller is an exempt recipient or (ii) the seller certifies its non-U.S. status (and certain other conditions are met). Certification of the beneficial owner's non-U.S. status usually would be made on Form W-8 under penalties of perjury, although in certain cases it may be possible to submit other documentary evidence. The term broker, generally includes all persons who, in the ordinary course of a trade or business, stand ready to effect sales made by others, as well as brokers and dealers registered as such under the laws of the United States or a state. These requirements generally will apply to a U.S. office of a broker, and the information reporting requirement generally will apply to a foreign office of a United States broker, as well as to a foreign office of a foreign broker (i) who is a controlled foreign corporation within the meaning of Section 957(a) of the Internal Revenue Code or (ii) 50% or more of whose gross income from all sources for the 3-year period ending with the close of its taxable year preceding the payment (or for such part of the period that the foreign broker has been in existence) was effectively connected with the conduct of a trade or business within the United States.

Any amounts withheld under the backup withholding rules from a payment to a beneficial owner would be allowed as a refund or a credit against such beneficial owner's United States federal income tax, provided that the required information is furnished to the United States Internal Revenue Service.

LEGALITY OF INVESTMENT

The Bonds are lawful investments and may be accepted as security for all fiduciary, trust and public funds, the investment or deposit of which shall be under the authority or control of any officer or agency of the United States. 16 U.S.C. § 831n-4(d).

The Bonds are acceptable as collateral for Treasury tax and loan accounts pursuant to 31 C.F.R. § 203.15(d)(1).

National banks may deal in, underwrite and purchase the Bonds for their own accounts in an amount not to exceed 10% of unimpaired capital and surplus. 12 U.S.C. § 24, seventh paragraph.

Federal Reserve Banks may accept the Bonds as eligible collateral for advances to depository institutions. 12 U.S.C. § 347 and 12 C.F.R. § 201.108(b)(13).

Federal savings and loan associations and federal savings banks may invest in the Bonds without regard to limitations generally applicable to investments. 12 U.S.C. § 1464(c)(1)(F).

The Bonds are "liquid assets" for federal savings and loan associations, federal savings banks and other Federal Home Loan Bank members, provided five years or less remain until maturity. 12 C.F.R. § 523.10(g)(3)(vii).

The Bonds are eligible as collateral for advances by Federal Home Loan Banks to federal savings and loan associations, federal savings banks and other members for which the Bonds are legal investments. 12 U.S.C. § 1430(a) and 12 C.F.R. § 525.7(b)(2).

Federal credit unions may purchase the Bonds. 12 U.S.C. § 1757(7)(E).

The Bonds are "obligations of a corporation which is an instrumentality of the United States" within the meaning of Section 7701(a)(19)(C)(ii) of the Internal Revenue Code for purposes of the 60 percent of assets limitation applicable to domestic building and loan associations.

UNDERWRITERS

Under the terms and subject to the conditions contained in an Underwriting Agreement dated the date hereof, the Underwriters named below have severally agreed to purchase, and TVA has agreed to sell to them, severally, the respective principal amounts of Bonds set forth opposite their respective names below:

	Principal Amount (In Thousands)	
Underwriter	Series F	Series G
Morgan Stanley & Co. Incorporated	$ 149,000	$ 250,000
The First Boston Corporation	148,500	249,900
Goldman, Sachs & Co.	148,500	249,900
Merrill Lynch, Pierce, Fenner & Smith Incorporated	148,500	249,900
Salomon Brothers Inc	148,500	249,900
Shearson Lehman Hutton Inc	148,500	249,900
AIBC Investment Services Corp.	3,500	5,500
Amsouth Bank N.A.	3,500	5,500
Bank of America NT & SA	15,000	25,000
BT Securities Corporation	15,000	25,000
Bear, Stearns & Co. Inc.	15,000	25,000
J.C. Bradford & Co.	15,000	25,000
Central Bank of the South	3,500	5,500
Chase Securities, Inc.	15,000	25,000
Chemical Securities, Inc.	15,000	25,000
Cherokee Securities Company	3,500	5,500
Citicorp Securities Markets, Inc.	15,000	25,000
Citizens & Southern National Bank	3,500	5,500
Craigie Incorporated	3,500	5,500
Cumberland Securities Company, Inc.	3,500	5,500
Daiwa Securities America Inc.	15,000	25,000
Daniels & Bell, Inc.	3,500	5,500
Deutsche Bank Capital Corporation	15,000	25,000
Dillon, Read & Co. Inc.	15,000	25,000
Discount Corporation of New York	3,500	5,500
Doley Securities, Inc.	3,500	5,500

Underwriter	Principal Amount (In Thousands) Series F	Series G
Dominion Investment Banking, Inc.	$ 3,500	$ 5,500
Donaldson, Lufkin & Jenrette Securities Corporation	15,000	25,000
A. Webster Dougherty & Co. Incorporated	3,500	5,500
Drexel Burnham Lambert Incorporated	15,000	25,000
Duncan-Williams, Inc.	3,500	5,500
A.G. Edwards & Sons, Inc.	3,500	5,500
Equitable Securities Corporation	3,500	5,500
Ewing Capital, Inc.	3,500	5,500
First American National Bank of Nashville	3,500	5,500
First National Bank of Chicago	15,000	25,000
First Tennessee Bank National Association	15,000	25,000
First Union National Bank of North Carolina	3,500	5,500
First Wachovia	3,500	5,500
Grigsby Brandford Powell Inc.	3,500	5,500
Howard, Weil, Labouisse, Friedrichs Incorporated	3,500	5,500
Interstate/Johnson Lane Corporation	3,500	5,500
Edward D. Jones & Co.	3,500	5,500
Kidder, Peabody & Co. Incorporated	15,000	25,000
Lazard Freres & Co.	15,000	25,000
WR Lazard & Laidlaw Incorporated	3,500	5,500
Manufacturers Hanover Securities Corporation	15,000	25,000
Marcus, Stowell & Beye, Inc.	3,500	5,500
McDonald & Company Securities, Inc.	3,500	5,500
J.P. Morgan Securities Inc.	15,000	25,000
Morgan Keegan & Company, Inc.	15,000	25,000
National Bank of Commerce (Memphis)	3,500	5,500
NCNB National Bank	3,500	5,500
The Nikko Securities Co. International, Inc.	15,000	25,000
Nomura Securities International, Inc.	15,000	25,000
PaineWebber Incorporated	15,000	25,000
Prescott, Ball & Turben, Inc.	3,500	5,500
Printon, Kane & Co.	3,500	5,500
Prudential-Bache Securities Inc.	15,000	25,000
Pryor, Govan, Counts & Co., Inc.	3,500	5,500
The Robinson-Humphrey Company, Inc.	3,500	5,500
Scully Brothers Foss & Wight	3,500	5,500
Security Pacific Merchant Bank	15,000	25,000
Smith Barney, Harris Upham & Co. Incorporated	15,000	25,000
South Carolina National Bank	3,500	5,500
Sovran Bank, N.A.	3,500	5,500
Stephens Inc.	3,500	5,500
SBCI Swiss Bank Corporation Investment Banking Inc.	15,000	25,000
Trust Company Bank	3,500	5,500
Tucker Anthony Incorporated	3,500	5,500
UBS Securities Inc.	15,000	25,000
Union Planters Investment Bankers Group, Inc.	3,500	5,500
Ward Associates, Inc.	3,500	5,500

Underwriter	Principal Amount (In Thousands) Series F	Series G
Wertheim Schroder & Co. Incorporated	$ 15,000	$ 25,000
Westpac Pollock Government Securities Inc.	15,000	25,000
Wheat, First Securities, Inc.	3,500	5,500
Dean Witter Reynolds Inc.	15,000	25,000
Yamaichi International (America), Inc.	15,000	25,000
Total	$1,500,000	$2,500,000

The Underwriting Agreement provides that the obligations of the several Underwriters to pay for and accept delivery of the Bonds are subject to the approval of certain legal matters by their counsel and to certain other conditions. The Underwriters are committed to take and pay for all of the Bonds if any are taken.

The Underwriters propose to offer part of the Bonds directly to the public at the public offering price set forth on the cover page hereof and part to certain dealers at a price that represents a concession not in excess of .400% of the principal amount of the Series F Bonds and .425% of the principal amount of the Series G Bonds. Any Underwriter may allow, and such dealers may reallow, a concession not in excess of .250% of the principal amount of the Bonds to certain other dealers.

TVA has agreed to indemnify the several Underwriters against certain liabilities.

VALIDITY OF THE BONDS

The validity of the Bonds will be passed upon for TVA by Edward S. Christenbury, Esq., General Counsel of TVA, and for the Underwriters by Mudge Rose Guthrie Alexander & Ferdon, 180 Maiden Lane, New York, New York 10038.

* * * * * *

Any statements in this Offering Circular Supplement involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact. This Offering Circular Supplement is not to be construed as a contract or agreement with the purchaser of any of the Bonds.

This Offering Circular Supplement has been approved by a duly authorized officer of the Tennessee Valley Authority.

Tennessee Valley Authority

By: /s/ WILLIAM F. MALEC

William F. Malec
Senior Vice President and
Chief Financial Officer

Dated November 17, 1989

OFFERING CIRCULAR
of
TENNESSEE VALLEY AUTHORITY
A Wholly Owned Corporate Agency and Instrumentality of the
UNITED STATES OF AMERICA

The Tennessee Valley Authority ("TVA" or "Corporation") presents this Offering Circular for the information of potential purchasers of its Power Bonds (the "New Power Bonds") to be issued pursuant to authority vested in TVA by the Tennessee Valley Authority Act of 1933, as amended (the "Act"), and pursuant to the Basic Tennessee Valley Authority Power Bond Resolution adopted by the Board of Directors of TVA (the "Board") on October 6, 1960, as amended on September 28, 1976 and on October 17, 1989 (the "Basic Resolution").

THE TENNESSEE VALLEY AUTHORITY

TVA is a wholly owned corporate agency and instrumentality of the United States established by the Act with the objective of developing the resources of the Tennessee Valley region in order to strengthen the regional and national economy and the national defense. Its specific purposes include: (1) an ample supply of power within an area of 80,000 square miles; (2) a modern navigable channel for the Tennessee River; (3) flood control on the Tennessee River and its tributaries, and assistance to flood control on the lower Ohio and Mississippi Rivers; (4) development and introduction of more efficient soil fertilizers; and (5) greater agricultural and industrial development and improved forestry in the Tennessee Valley region.

TVA's programs fall into two types of activities—the power program and the non-power programs. Substantially all TVA revenues and assets are attributable to the power program. TVA's non-power programs, like similar services provided by the federal government in other regions of the country, are funded by Congressional appropriations. For the fiscal year ending September 30, 1989, Congressional appropriations for the non-power programs were $103 million. TVA will also receive $121 million in Congressional appropriations for fiscal 1990. The power program is required to be self-supporting from revenues it produces. Financial accounts for the two types of TVA activities—power and non-power—are kept separately. Proceeds from the sale of TVA's bonds, notes, and other evidences of indebtedness, including New Power Bonds (collectively "Evidences of Indebtedness"), may be used only for the power program.

TVA is authorized by the Act to issue Evidences of Indebtedness to assist in financing its power program in an amount not exceeding $30 billion outstanding at any one time. At June 30, 1989, outstanding Evidences of Indebtedness aggregated $18.9 billion, including $300 million of Power Bonds held by the Federal Financing Bank (the "FFB") that are being redeemed under in-substance defeasance arrangements. See "The Refinancing Plan and Use of Proceeds". Congress has reserved the right to alter, amend, or repeal the Act, but has provided that no amendment or repeal shall operate to impair the obligation of any contract made by TVA in the exercise of any power conferred by the Act.

The date of this Offering Circular is October 17, 1989

TVA'S STATUS AS A U.S. GOVERNMENT CORPORATION

TVA is, and has been since its inception, a wholly owned corporate agency and instrumentality of the United States of America.

TVA is administered by the Board which is composed of three persons appointed by the President and confirmed by the Senate. Appointments are for nine-year staggered terms with one term expiring with each three-year interval. The Board has sole authority for determining the rates which TVA charges for power. The Act requires the Corporation to charge rates for power which, among other things, will produce gross revenues sufficient to provide funds for operation, maintenance, and administration of its power system; payments to states and counties in lieu of taxes; debt service on outstanding Evidences of Indebtedness, including provision and maintenance of reserve funds and other funds established in connection therewith; and annual payments to the U.S. Treasury (the "Treasury") in repayment of and as a return on the Government's appropriation investment in TVA power facilities. See "The Basic Resolution; Power Bonds". Such appropriation investment totaled $768 million as of June 30, 1989. See "Certain Provisions of the Tennessee Valley Authority Act—Payments to the Treasury".

TVA is required annually to file with the President and with the Congress a financial statement and a complete report as to the business of the Corporation. The Comptroller General of the United States is authorized to periodically audit the transactions of TVA.

Under certain conditions, TVA may borrow from the Treasury up to $150 million for a period of one year or less. Since 1962, TVA has borrowed $150 million each year under such arrangement with the Treasury. Additionally, any issuance by TVA of Evidences of Indebtedness with a term of one year or longer is subject to the approval of the Secretary of the Treasury as to the issue date and maximum interest rate. The borrowing authority of TVA is treated as budget authority by the Office of Management and Budget for purposes of the budget of the United States.

From 1960 to 1974, TVA issued Evidences of Indebtedness in the public markets. Beginning in 1974, with the exception of its borrowings from the Treasury, TVA has borrowed solely from the FFB. Pursuant to the Federal Financing Bank Act of 1973, Congress established the FFB under the general direction and supervision of the Secretary of the Treasury. The purpose of the FFB is to coordinate the market financing of federal agencies and, accordingly, it is authorized to purchase obligations issued, sold or guaranteed by any federal agency.

Interest on Evidences of Indebtedness issued by TVA is subject to federal income taxation. Under the Act, Evidences of Indebtedness are exempt both as to principal and interest from all taxation now or hereafter imposed by any state or local taxing authority except estate, inheritance and gift taxes.

THE REFINANCING PLAN AND USE OF PROCEEDS

TVA has implemented a significant cost reduction program over the past several years in an ongoing effort to minimize rates for its power. However, TVA continues to be burdened by high interest costs. Interest expense was equivalent to approximately 36 percent of total revenues in the twelve months ended June 30, 1989. During June and July of 1989, TVA successfully executed an in-substance defeasance of $800 million of Power Bonds held by the FFB which will be redeemed on their respective first call dates, except that under certain circumstances, with the concurrence and at the option of the FFB, such Power Bonds may be repaid prior to their first call dates. In July 1989, in order to generate further interest cost savings, TVA announced plans to pursue alternatives for the refinancing of additional high-coupon debt.

TVA proposes to issue approximately $8 billion of New Power Bonds principally for the purpose of defeasing approximately $6.7 billion of Power Bonds held by the FFB with a weighted average coupon of approximately 12.25 percent. TVA's long-term borrowings from the FFB totaled $16.7 billion at June 30, 1989.

The Power Bonds to be refinanced are to be redeemed on the earliest permitted date. Set forth below is a list, showing the amounts to be refinanced, coupons, call premiums at first call dates, and first call dates of the Power Bonds held by the FFB which TVA presently proposes to refinance.

Bond Issue	Amount to be Refinanced	Coupon	Call Premium at First Call Date	First Call Date
	(Millions)			
1980A	$500	11.225%	6.640%	January 31, 1990
1980B	500	12.955%	7.670%	March 31, 1990
1980C	500	10.475%	6.200%	June 30, 1990
1980D	500	10.890%	6.450%	August 31, 1990
1980E	500	12.425%	7.350%	November 30, 1990
1981A	500	12.735%	8.420%	March 31, 1991
1981B	500	12.925%	8.540%	April 30, 1991
1981C	500	13.255%	8.760%	June 30, 1991
1981E	650	13.035%	8.620%	December 31, 1991
1982A	700	13.565%	8.970%	April 30, 1992
1982B	150	13.575%	8.970%	May 31, 1992
1982D	100	11.945%	7.900%	September 30, 1992
1982E	200	10.725%	7.090%	November 30, 1992
1983A	150	10.575%	6.990%	January 31, 1993
1983B	150	10.575%	6.990%	March 31, 1993
1983C	100	10.425%	6.890%	May 31, 1993
1983D	250	11.685%	7.720%	August 31, 1993
1983E	150	11.905%	7.870%	January 31, 1994
1984A	100	12.055%	7.970%	January 31, 1994

TVA presently anticipates accomplishing this refinancing by effecting an in-substance defeasance, pursuant to which, the proceeds of New Power Bonds will be deposited with a trustee and invested in securities (the "Defeasance Portfolio") which satisfy the requirements for an in-substance defeasance under Statement of Financial Accounting Standards No. 76, "Extinguishment of Debt". The Defeasance Portfolio will bear interest and mature at times and in amounts sufficient to redeem at par plus the applicable premium and to pay interest on such Power Bonds to their respective first call dates.

In September 1989, TVA announced, based on discussions with the Treasury, that it would access the public markets to effect this refinancing. FFB has advised TVA that FFB policy does not permit federal agencies accessing public markets financing to freely access FFB financing. However, FFB and TVA have signed a letter of intent covering a mutual understanding pursuant to which FFB will provide, for a period of at least two years, a short term facility of $2 billion for working capital purposes. In addition, FFB will, for a period of up to four years, continue to make available up to $2.5 billion of financing for TVA's nuclear fuel lease arrangement with Seven States Energy Corporation ("SSEC"). See "Nuclear Power Program—Nuclear Fuel".

Pursuant to this understanding, TVA anticipates that FFB will enter into an agreement with TVA under which FFB will commit to purchase for a two year period, up to $2 billion at any one time outstanding of short term Power Bonds. All such Power Bonds must mature not later than the end of such two year period. Such agreement will be extendable at the option of FFB for further two year periods.

With regard to the nuclear fuel financing facility, TVA presently estimates that $2.3 billion will be outstanding under such facility at the end of the four year period of availability. At such time, this amount will be required to be financed through some other arrangements which may include the issuance of Power Bonds.

The letter of intent also provides that notwithstanding the longstanding FFB policy of not allowing an FFB borrower to return to the FFB for funding after having borrowed in the market, the FFB will consider a proposal by TVA to return to the FFB for funding after it has borrowed in the market and will give TVA a good faith hearing to make its case in light of then existing circumstances. Permission to return to the FFB would constitute a major change to existing FFB policy.

The refinancing and defeasance plans are subject to, among other things, changes in market conditions and financing objectives. Therefore, there can be no assurance that TVA will complete this refinancing as described above.

SELECTED FINANCIAL DATA

The following selected financial data of TVA's power program for the fiscal years 1984 through 1988 have been derived from TVA's audited financial statements. Data for the twelve months ended June 30, 1989, are derived from unaudited financial statements which in the opinion of management of TVA include all adjustments (consisting only of normal recurring adjustments) necessary for the fair presentation of results for such period. The data below should be read in conjunction with the financial statements and notes thereto presented elsewhere herein. Results for the twelve months ended June 30, 1989, are not necessarily indicative of results for the fiscal year ending September 30, 1989.

Power Earnings Data	Twelve Months Ended June 30, 1989 (Unaudited)	Fiscal Year Ended September 30				
		1988	1987	1986	1985	1984
		(Dollars in Millions)				
Operating Revenues	$5,182	$5,322	$5,156	$4,638	$4,547	$4,453
Operating Expenses	3,337	3,450	3,300	3,018	2,802	2,774
Operating Income	1,845	1,872	1,856	1,620	1,745	1,679
Other Income and Deductions	56	(155)	(172)	(196)	(286)	(787)
Income Before Interest Charges	1,901	1,717	1,684	1,424	1,459	892
Interest Expense	1,863	1,829	1,756	1,693	1,611	1,559
Allowance for Funds Used During Construction	(282)	(525)	(523)	(543)	(578)	(533)
Net Interest Charges	1,581	1,304	1,233	1,150	1,033	1,026
Net Power Income	$ 320	$ 413	$ 451	$ 274	$ 426	$ (134)
Ratio of Earnings to Fixed Charges (Unaudited)[1]	1.17	1.23	1.26	1.16	1.27	0.91

Power Balance Sheet Data	June 30, 1989 (Unaudited)	September 30				
		1988	1987	1986	1985	1984
		(Dollars in Millions)				
Assets						
Property Plant and Equipment	$21,155	$20,618	$19,355	$18,272	$16,848	$15,615
Investment Funds	837	922	710	502	329	145
Current Assets	1,680	1,194	1,273	1,067	1,183	1,432
Deferred Charges and Other Assets	2,842	3,090	2,979	2,965	3,173	3,453
TOTAL ASSETS	$26,514	$25,824	$24,317	$22,806	$21,533	$20,645
Capitalization and Liabilities						
Proprietary Capital	$ 3,780	$ 3,508	$ 3,184	$ 2,827	$ 2,659	$ 2,349
Long-Term Debt	17,803[2]	17,403	17,502	16,102	15,521	14,521
Other Liabilities	2,818	2,677	2,266	2,229	1,834	1,796
Current Liabilities	2,113	2,236	1,365	1,648	1,519	1,979
TOTAL CAPITALIZATION AND LIABILITIES	$26,514	$25,824	$24,317	$22,806	$21,533	$20,645

[1] Ratio of Earnings to Fixed Charges is calculated by dividing Net Power Income plus Interest Charges by Interest Charges.

[2] Includes $500 million of debt defeased through in-substance defeasance arrangements in July 1989.

Cost Reduction Program

In 1988, the Board announced a restructuring and downsizing of TVA and set a goal of no rate increases for three years beginning with fiscal 1989. To accomplish this goal, significant steps have been taken to make the power system more efficient and productive. The number of TVA employees and personnel supplied by third party contractors has been reduced from 36,300 as of June 30, 1988, to 27,500 as of June 30, 1989. The cumulative annual labor cost reduction, including that for contractor personnel, is estimated at $400 million at September 30, 1989. This amount includes both operating and capitalized costs. Approximately 55 percent of these costs are operating expenses. Further employee reductions and other economies and efficiencies are expected to reduce operating expenses by an additional $45 million for fiscal 1990. Additional reductions in employment have been announced that are expected to lower total employment from 25,800 as of August 1989 to about 24,000 by the end of fiscal 1990, excluding personnel supplied by third party contractors.

The management actions taken to reduce cost and interest expense have led to the achievement of the no-rate-increase goal for the fiscal year ending September 30, 1989. The Board recently determined that there is no need to adjust rates for fiscal 1990. Other cost reductions and efficiencies are being studied to contribute to the achievement of the no-rate-increase goal for the third year.

Results of Operations

Earnings Summary

Net income for the twelve months ended June 30, 1989 (unaudited), decreased by 23 percent compared to fiscal 1988. The decrease resulted primarily because the allowance for funds used during construction ("AFUDC") decreased by $243 million. AFUDC, which is a noncash addition to net income, declined as a result of TVA's action to defer construction at two nuclear units—Watts Bar Unit Two and Bellefonte Unit One. See "Nuclear Power Program". In addition, revenues declined $140 million primarily because of reduced payments from the Department of Energy (the "DOE"). See Note 13 of Notes to Financial Statements. Partially offsetting these negative impacts on net income was a $353 million decrease in operating expenses (excluding depreciation and amortization), much of which resulted from TVA's cost reduction program. Net income decreased by 8 percent from fiscal 1987 to fiscal 1988 primarily because of an increase in net interest charges. The decrease in fiscal 1988 followed a 65 percent increase from fiscal 1986 to fiscal 1987 which was primarily the result of a $339 million rate adjustment in fiscal 1987.

Operating Revenues

Operating revenues decreased by 3 percent in the twelve months ended June 30, 1989, compared to fiscal 1988 primarily due to lower sales to DOE. Operating revenues increased 3 percent in fiscal 1988 from fiscal 1987 and 11 percent in fiscal 1987 from fiscal 1986, primarily due to higher sales to municipalities and cooperatives in each fiscal year. Revenues from the sale of electric energy to municipalities and cooperatives have represented 80 percent, 77 percent, 77 percent, and 75 percent of total revenues for the twelve months ended June 30, 1989, and fiscal years 1988, 1987, and 1986, respectively. Sales of electric energy to municipalities and cooperatives increased 7.8 billion kilowatt hours ("kWh") from fiscal 1986 to the twelve months ended June 30, 1989. The largest increase in sales volume to municipalities and cooperatives from fiscal 1986 to fiscal 1987 was 4.1 billion kWh, excluding the effect of an accounting change to record unbilled revenue. See Note 1 of Notes to Financial Statements. Energy sales in kWh to industries increased by 6 percent in the twelve months ended June 30, 1989, compared to fiscal 1988, and 4 percent in fiscal 1988 compared to fiscal 1987, after a 3 percent decrease from fiscal 1986 to fiscal 1987. Revenues from federal agencies declined primarily because of reductions in sales to DOE.

Operating Expenses

Operating expenses for the twelve months ended June 30, 1989, decreased by $318 million compared to fiscal 1988, excluding the amortization of losses on cancelled nuclear generating units

representing $232 million and $27 million in the twelve months ended June 30, 1989, and fiscal 1988, respectively. This decrease follows increases of $155 million in fiscal 1988 and $250 million in fiscal 1987. Much of the decrease in expenses in the twelve months ended June 30, 1989, is attributable to TVA's cost cutting efforts.

Financial Condition

Liquidity and Capital Resources

TVA's liquidity is affected primarily by construction expenditures and by expenditures related to debt maturities and redemptions. The resources available to meet these requirements include internal cash generation and external financing. In June and July 1989, an in-substance defeasance totaling $800 million of TVA's highest cost Power Bonds was accomplished with the proceeds from the liquidation of a bond retirement fund. This action will provide annual net savings of approximately $40 million. TVA also plans to provide for the in-substance defeasance of up to $6.7 billion of additional high-coupon debt by issuing New Power Bonds. The defeasance of the total $6.7 billion could result in a reduction of interest expense by up to $100 million annually. See "The Refinancing Plan and Use of Proceeds".

TVA met 65 percent of its capital requirements for the twelve months ended June 30, 1989, from cash generated internally, compared with 29 percent in fiscal 1988, 42 percent in fiscal 1987, and 23 percent in fiscal 1986. The increase in the twelve months ended June 30, 1989, is due primarily to a significant increase in amortization of cancelled nuclear plant being recovered currently through rates. See Note 1 of Notes to Financial Statements.

During the twelve months ended June 30, 1989, $700 million of long-term debt was issued to redeem a maturing issue of $500 million of Power Bonds and to provide $200 million for the construction program. The net increase in long-term debt to finance the power program was $400 million in fiscal 1988, $855 million in fiscal 1987, and $1,025 million in fiscal 1986.

THE AREA SUPPLIED BY TVA

TVA supplies power in most of Tennessee, in northern Alabama, northeastern Mississippi, and southwestern Kentucky, and in small portions of Georgia, North Carolina, and Virginia. The population of the area served by TVA is over 7 million. Subject to certain minor exceptions, TVA may not without specific authorization by Act of Congress enter into contracts which would have the effect of making it or its distributors a source of power supply outside the area for which TVA or its distributors were the primary source of power supply on July 1, 1957.

TVA is primarily a wholesaler of power. Its customers are composed of three major groups: (1) distributors, consisting of municipal and cooperative systems; (2) industries which have large or unusual loads; and (3) federal agencies. In addition, TVA has entered into exchange power arrangements with most of the surrounding electric systems.

RATES, CUSTOMERS AND MARKET

The Act delegates to the Board sole responsibility for establishing the rates which TVA charges and authorizes it to include in power contracts such terms and conditions as in its judgment may be necessary or desirable for carrying out the purposes of the Act. The Act requires the Corporation to charge rates for power which, among other things, will produce gross revenues sufficient to provide funds for operation, maintenance, and administration of its power system; payments to states and counties in lieu of taxes; debt service on outstanding Evidences of Indebtedness, including provision and maintenance of reserve funds and other funds established in connection therewith; and annual payments to the Treasury in repayment of and as a return on the Government's appropriation investment in TVA power facilities. See "The Basic Resolution; Power Bonds—Rate Covenant". Rates set by the Board are not subject to review or approval by any state or federal regulatory body.

The revenue increases resulting from rate adjustments implemented by the Board in fiscal years 1986, 1987, and 1988 were 3.9 percent, 7.5 percent, and 1.8 percent, respectively. The Board determined that there was no need to adjust rates for fiscal years 1989 and 1990.

Because of DOE's withholding of certain power contract payments, it was initially determined that an increase of 7.8 percent was necessary for fiscal 1988 and such an increase was placed in effect. However, after a resolution of the DOE matter by agreement between TVA and DOE in December 1987, a substitute adjustment was implemented three months later that reduced the increase to the 1.8 percent noted above. For a discussion of the DOE matter, see "Federal Agencies" below.

A summary of power program operating revenues by customer groups for each of the last five fiscal years ended September 30, and for the twelve months ended June 30, 1989, follows:

	Total	Municipal and Cooperative Distributors	Industries	Federal Agencies[1]	Electric Utilities and Other
			(Dollars in Millions)		
Twelve Months Ended June 30, 1989 (Unaudited)	$5,182	$4,121	$524	$442	$ 95
Fiscal Year					
1988	5,322	4,100	513	611	98
1987	5,156	3,974	502	596	84
1986	4,638	3,487	556	518	77
1985	4,548	3,272	629	566	81
1984	4,453	3,190	685	649	(71)[2]

[1] Includes TVA use for construction and non-power programs.

[2] Includes revenue credit of $150 million which was refunded to customers in fiscal 1985.

Municipal and Cooperative Distributors

TVA has entered into contracts with 160 municipal and cooperative distributors. Such contracts require distributors to purchase substantially all of their electric power and energy requirements from TVA. Standard power contracts with the municipal and cooperative distributors are for terms of 20 years but are subject to termination by TVA or the distributor after the first 10 years on at least four years prior notice. Municipal and cooperative distributors accounted for approximately 79.5 percent of total operating revenues in the twelve months ended June 30, 1989. The present average remaining term of all such distributor contracts is about eleven years.

The contracts contain standard provisions specifying the wholesale rates, resale rates, and terms and conditions under which the power is to be distributed. Under the contracts, TVA, on a quarterly basis, may determine and make adjustments in the wholesale rate schedule with corresponding adjustments in resale rate schedules necessary to enable TVA to meet all requirements of the Act and the tests and provisions of its bond resolutions. In addition, the contracts provide for agreement between the parties on general or major changes in both the wholesale and resale rate schedules, and permit TVA, if agreement is not reached, to make changes in such schedules to carry out the objectives of the Act, to meet financial requirements and tests, and to comply with the provisions of its bond resolutions.

In the twelve months ended June 30, 1989, the average charge for power sold to distributors under TVA's wholesale power rate was 4.4 cents per kWh.

The resale rates under which the distributors serve ultimate consumers are stipulated in the power contracts between the distributors and TVA and are revised from time to time to reflect changes in costs, including changes in the wholesale cost of power. They are designed to promote the Act's objective of an adequate supply of power at the lowest feasible rates. The average residential charge in the TVA region was 5.7 cents per kWh for the calendar year 1988. The corresponding national average was 7.5 cents per kWh for the calendar year 1988.

Five of the municipalities which purchase power from TVA accounted for 29 percent of total revenues for the twelve months ended June 30, 1989. These municipal distributors and the expiration dates of their current contracts are listed below. These contracts may be terminated upon four years notice to TVA, but no earlier than ten years before their expiration dates.

Memphis, Tennessee.....	December 31, 2004
Nashville, Tennessee.....	December 18, 1997
Knoxville, Tennessee	June 30, 2008
Chattanooga, Tennessee.....	January 22, 2009
Huntsville, Alabama	May 25, 2000

Industries Served Directly

Contracts with industries served directly by TVA normally are for terms of 10 years but are subject to termination by TVA or the customer upon a minimum notice period that varies according to the customer's contract demand and the period of time service has been provided at that location. Industries directly served accounted for approximately 10.2 percent of total power revenues in the twelve months ended June 30, 1989. The power sold directly to industries is delivered under contracts at rates established by TVA. Such rates are the same as those charged by distributors to large industries (those with demand greater than 5,000 kW) they serve. The average charge to directly served industrial customers during the twelve months ended June 30, 1989, was 3.3 cents per kWh.

Federal Agencies

Power is sold to federal agencies under the same contract terms and rates as directly served industries. In the twelve months ended June 30, 1989, the average charge for power sold to directly served federal agencies, excluding that to DOE, was 4.8 cents per kWh. Revenues received from DOE

amounted to approximately 10 percent of revenues in fiscal years 1986 through 1988 and the twelve months ended June 30, 1989. Under an agreement with DOE, DOE's payment obligations will be phased out over the remaining contract term through 1994. Reductions in demand under the DOE contracts have been taken into account in TVA's future supply plans. See Note 13 of Notes to Financial Statements.

COMPETITION

The electric power industry has become increasingly competitive in the past decade. Competition may intensify in the future as a result of federally encouraged deregulation of utilities affecting the wholesale power markets. Although other power suppliers, under certain circumstances, may sell power in the area where TVA power is distributed, there are statutory provisions restricting TVA from expanding the area in which it is a source of power supply. It is important that TVA market power at rates competitive with other suppliers in the region. TVA's success in keeping power rates constant for two successive years is already showing results. TVA believes that its rate freeze has assisted distributors of TVA power in competing for new commercial and industrial loads. Interest has been exhibited by existing industrial customers in expanding their operations.

In today's competitive environment, other power suppliers may make offers to serve any of TVA's customers. Upon expiration or termination of a customer's contract with TVA, a customer may be able to contract with another supplier. The city of Memphis, which accounted for 9 percent of TVA power operating revenues in the twelve month period ending June 30, 1989, is currently conducting a study which will review the possibility of alternate power supply arrangements for its long-term power supply. TVA cannot predict the extent, if any, to which these factors will affect its operations in the future.

POWER AND ENERGY REQUIREMENTS

TVA's load (net system energy requirements) on a weather normalized basis grew from 94.4 billion kWh in fiscal 1970 to 123.3 billion kWh in fiscal 1980, representing a compound annual growth rate of 2.7 percent.

During the period of 1980 to 1986, TVA's load actually declined to 107.8 billion kWh in 1986 on a weather normalized basis. This decline was caused by the severe economic recession of 1982-1983, high energy prices, and a decline in sales to DOE for its uranium enrichment operations from 15.9 billion kWh in 1980 to 0.8 billion kWh in 1986. TVA's load, excluding sales to DOE, grew from 95.3 billion kWh on a weather normalized basis in 1983 to 112.9 billion kWh in 1988, which corresponds to a compound annual growth rate of 3.5 percent since 1983. TVA's best estimate of net system energy requirements for fiscal 1989 is 117.0 billion kWh for a growth rate of 3.6 percent over fiscal 1988 on a weather normalized basis.

The following table sets forth TVA's historical demand and energy requirements on a weather normalized basis for the periods indicated.

Fiscal Year Ended September 30	Demand	% Change	Net System Energy Requirements	% Change
	(Megawatts)		(Billions kWh)	
1984	19,707	1.6	112.8	1.9
1985	19,208	-2.5	108.3	-4.0
1986	19,205	0.0	107.8	-0.5
1987	19,535	1.7	110.1	2.1
1988	20,269	3.8	112.9	2.5
Twelve Months Ended June 30, 1989	20,340		116.0	

TVA prepares annual forecasts of future power and energy requirements as part of its planning and budgeting process. In preparing its energy forecast, TVA utilizes forecasts of national economic activity and of substitute fuel prices, primarily natural gas and oil. TVA produces its own forecast of electricity prices for the TVA area based on TVA's system expansion plan and power supply requirements. Three major causal factors (economic activity, substitute fuel prices and electricity prices) are used to forecast electricity sales to distributor served residential, commercial, and industrial customers. Special studies are made to forecast electricity requirements for the directly served industries of paper, chemicals, aluminum, and ferroalloys. These forecasts are combined to arrive at the load forecast for the entire TVA system.

TVA's forecast procedure involves producing a range of load forecasts for the explicit purpose of bounding the range of uncertainty associated with load growth. The load forecasts are produced probabilistically. TVA believes that the high load forecast has a 90-percent probability that actual load will be less than forecast, that the medium load forecast has a 50-percent probability that actual load will be less than forecast, and that the low load forecast has a 10-percent probability that actual load will be less than forecast. The range of forecasts for fiscal years 1990-1999 are provided below.

Forecasted Net System Energy and Demand Requirements

Fiscal Year Ending September 30	High Forecast		Medium Forecast		Low Forecast	
	Energy	Demand	Energy	Demand	Energy	Demand
	(Billions of kWh)	(Megawatts)	(Billions of kWh)	(Megawatts)	(Billions of kWh)	(Megawatts)
1990	129.8	23,188	122.5	21,829	114.9	21,115
1991	132.3	23,824	123.3	22,064	113.8	21,224
1992	136.8	24,798	125.8	22,573	115.4	21,554
1993	141.4	25,784	128.6	23,119	117.1	21,897
1994	146.4	26,784	132.0	23,704	119.2	22,243
1995	151.3	27,795	135.3	24,304	121.1	22,609
1996	156.3	28,827	138.5	24,925	122.0	22,800
1997	161.2	29,871	141.5	25,559	122.7	23,003
1998	166.1	30,933	144.5	26,217	123.5	23,218
1999	171.4	32,011	148.0	26,882	124.7	23,460

CONSTRUCTION EXPENDITURES

Cash required by TVA for construction expenditures totaled $826 million, $1,300 million, $973 million, and $817 million in the twelve months ended June 30, 1989, and fiscal years 1988, 1987, and 1986, respectively. Cash required by TVA for construction expenditures and estimated new borrowings for the fiscal years 1989-1994 are shown in the table below. See "Nuclear Power Program" for assumed nuclear plant startup dates used for planning purposes.

Projected Expenditures for Capital Facilities	Fiscal Year Ending September 30					
	1989	1990	1991	1992	1993	1994
	(Dollars in Millions)					
Fossil & Hydro Additions and Improvements	$ 192	$ 234	$ 305	$ 304	$ 344	$ 392
Transmission System Facilities	56	74	78	91	87	94
Nuclear Facilities						
New Construction	314	286	305	284	478	488
Modifications	236	215	258	238	270	197
Recovery Cost[1]	189	139	175	166	118	38
Other General Facilities	56	61	70	73	75	77
Total Capital Facilities	$1,043	$1,009	$1,191	$1,156	$1,372	$1,286
New Borrowings for Projected Capital Facilities	$ 300	$ 100	$ 170	$ 40	$ 175	$ 30

[1] See Note 1 of Notes to Financial Statements.

TVA's construction program and related expenditures are continuously reviewed and periodically revised because of changes in estimated system load growth, rates of inflation, nuclear licensing requirements and schedules, the availability and timing of environmental, siting and other regulatory approvals, the scope of modifications required by regulatory agencies, including the Nuclear Regulatory Commission (the "NRC"), the availability and costs of external sources of capital and other factors beyond TVA's control. All estimated capital costs beyond June 1989 assume an inflation rate of 4.5 percent for the remainder of fiscal 1989 and fiscal 1990; and 5.5 percent for fiscal years beyond 1990, unless otherwise noted.

POWER SYSTEM

TVA's power generating facilities at June 30, 1989, included 29 hydro-electric plants, 12 coal-fired plants, 1 nuclear plant, 1 pumped storage hydro-electric plant, and 4 gas turbine installations. Power is delivered to TVA customers over a transmission system of approximately 17,200 miles of lines, including 2,300 miles of extra-high-voltage (500,000 volt) transmission lines. The system interconnects with neighboring power systems at numerous points and TVA has various types of interchange arrangements with these systems. The extent and types of interchange transactions depend upon the characteristics of the systems' loads, the management policies of the systems, and other factors. Interchange arrangements are an essential part of TVA's efforts to minimize investment in electrical facilities, increase the reliability of service, affect operating economies, and minimize the cost of electric energy.

During the twelve months ended June 30, 1989, 79 percent of the power generated by the TVA coordinated system was by fossil fired plants, 11 percent by hydro, and 10 percent by nuclear. Coal consumption during this time was 34.1 million tons. Coal is purchased under contracts ranging from a single delivery to deliveries over several years. Management believes the sources and availability of fuel materials essential to its business should be adequate for the foreseeable future.

Approximately 55 percent of TVA's coal comes from underground mines, and the balance from surface mines. All of TVA's term purchase agreements involving mining require reclamation of the land involved. TVA attempts to keep approximately 30 days' coal supply on hand at most times, and as of June 30, 1989, TVA had approximately 35 days' coal supply in inventory.

TVA's power system is one of the largest in the nation in capacity and in energy production. Its size permits the construction of large facilities which result in lower unit costs. Most of TVA's dams were completed years ago when construction costs were far below present-day levels. Because most of the dams are multipurpose, their cost is shared by navigation, flood control, recreation and local economic development as well as by power; thus, each purpose is served at a substantially lower cost than if the dams had been built for a single purpose.

The following table shows the generating capacity on this coordinated system as of June 30, 1989:

	Generating Units	Year Last Unit Placed In Service	Installed Capacity kW[1]
TVA Hydro Plants			
Appalachia	2	1943	82,800
Blue Ridge	1	1931	20,000
Boone	3	1953	76,400
Chatuge	1	1954	10,000
Cherokee	4	1953	135,180
Chickamauga	4	1952	120,000
Douglas	4	1954	120,600
Fontana	3	1954	238,500
Fort Loudoun	4	1949	139,140
Fort Patrick Henry	2	1954	36,000
Great Falls	2	1925	31,860
Guntersville	4	1952	115,200
Hiwassee	2	1956	117,100
Kentucky	5	1948	175,000
Melton Hill	2	1964	72,000
Nickajack	4	1968	103,950
Norris	2	1936	100,800
Nottely	1	1956	15,000
Ocoee No. 1	5	1914	18,000
Ocoee No. 2	2	1913	21,000
Ocoee No. 3	1	1943	28,800
Pickwick	6	1952	240,240
South Holston	1	1951	38,500
Tims Ford	1	1972	45,700
Watauga	2	1949	57,600
Watts Bar	5	1944	166,500
Wheeler	11	1963	378,000
Wilbur	4	1950	10,700
Wilson	21	1962	629,840
Total TVA Hydro Plants			3,344,410
Other Hydro Plants			
Tapoco dams			326,500[2]
Corps of Engineers dams			405,000[3]
Total Other Hydro Plants			731,500
TVA Pumped Storage Plant			
Raccoon Mountain Pumped Storage Hydro	4	1979	1,530,000
Total Hydro			5,605,910

	Generating Units	Year Last Unit Placed In Service	Installed Capacity kW[1]
Coal-Fired Plants			
Allen	3	1959	990,000
Bull Run	1	1967	950,000
Colbert	5	1965	1,350,000
Cumberland	2	1973	2,600,000
Gallatin	4	1959	1,255,200
John Sevier	4	1957	800,000
Johnsonville	10	1959	1,485,200
Kingston	9	1955	1,700,000
Paradise	3	1970	2,558,200
Shawnee	10	1956	1,750,000
Watts Bar	4	1945	240,000[4]
Widows Creek	8	1965	1,968,760
Total Coal-Fired Plants			17,647,360
Nuclear Plants			
Browns Ferry	3	1977	3,456,000[5]
Sequoyah	2	1982	2,441,160
Total Nuclear Plants			5,897,160
Gas Turbine Installations			
Allen	20	1972	620,800
Colbert	8	1972	476,000
Johnsonville	16	1975	1,088,000
Gallatin	4	1975	325,200
Total Gas Turbine Installations			2,510,000
Total Capacity			31,660,430

[1] Installed capacity as stated is the name-plate ratings of the generating units. Dependable generating capacity of a unit may be higher or lower than the name-plate rating and will vary with the season, weather, fuel quality and other factors. In addition, with regard to gas turbine units, the availability factor is relatively low. For the status of certain units, see footnotes 4 and 5 below. For planning purposes, TVA currently estimates dependable total hydro capacity of approximately 5,500 MW; dependable coal-fired capacity of approximately 15,800 MW; dependable nuclear power capacity of approximately 5,500 MW and; dependable gas turbine capacity of approximately 2,100 MW, for a total dependable capacity of approximately 28,900 MW.

[2] Effective June 21, 1990, the Tapoco dams will no longer be operated as part of the TVA system.

[3] The Corps of Engineers' dams on the Cumberland River System have a total installed capacity of 853,000 kW, of which 405,000 kW is available to TVA under a marketing agreement with Southeastern Power Administration.

[4] These units are mothballed and are not readily capable of operating. Additional capital investment would likely be required to bring these units back to reliable operating status.

[5] This three-unit nuclear plant in northern Alabama was taken offline in March 1985 for certain plant modifications and regulatory improvements. At June 30, 1989, the projected date for returning one unit to service is mid-1990. Dates for returning the other two units have not been established. See "Nuclear Power Program".

Under arrangements among TVA, the United States Corps of Engineers (the "CORPS"), and the Southeastern Power Administration (the "SEPA"), eight hydro plants of the CORPS comprising the Cumberland River system are operated in coordination with the TVA system. These arrangements further provide for capacity (405,000 kW) and energy from the Cumberland River system to be supplied to TVA by SEPA at the points of generation, and the price paid for the power to be based on the operating and maintenance expenses and amortization of the power facilities. A portion of the output of the Cumberland River system is also made available to SEPA's customers outside the TVA region. The agreement with SEPA covering these arrangements for power from the Cumberland River system continues through June 30, 1994, and year to year thereafter. The agreement can be terminated upon three years notice but not prior to June 30, 1994.

NUCLEAR POWER PROGRAM

Overview

TVA began an ambitious nuclear plant construction program in 1966 to meet projected system load growth. Each unit in the TVA system has been designed and built by TVA. At the height of the construction program, TVA had 17 nuclear units either under construction or in commercial operation at seven plant sites.

In August 1982, because of lower-than-expected load growth (see "Power and Energy Requirements"), TVA cancelled construction of four nuclear units. In August 1984, four more units were cancelled. Total investment in the eight units at the time of cancellation was $4.6 billion. Through June 30, 1989, $2.9 billion had been written off or amortized, with the remaining $1.7 billion to be amortized over the next six years at the rate of approximately $270 million per year. TVA will recover its investment in cancelled plants through rates or they will be written off against retained earnings.

By August 1985, TVA had delayed completion of two units each at Watts Bar and Bellefonte Nuclear Plants, and TVA had shut down its three-unit Browns Ferry Nuclear Plant and its two-unit Sequoyah Nuclear Plant because of an increasing number of technical and operational problems. Many of these problems had resulted in multiple escalated enforcement actions by the NRC for violations of its regulations and the imposition by the NRC of significant civil fines. In a September 1985 letter, the NRC required TVA to address its corrective actions in three general areas of concern: (1) programmatic and management deficiencies contributing to poor direction and control of TVA's nuclear activities, (2) plant specific deficiencies in several functional areas, and (3) a lack of confidence in TVA management expressed to NRC by TVA employees regarding the adequacy of construction of the Watts Bar units. In that letter, the NRC requested that TVA furnish certain information to the NRC before restarting any of its licensed nuclear units or requesting a license for Watts Bar Unit One.

Nuclear Recovery Program

As a result of an extensive review of its nuclear program, TVA determined that the primary cause of the problems was the lack of a sufficient number of experienced nuclear managers who could provide leadership and proper direction for TVA's nuclear activities. In response to this situation, TVA restructured its organization and assigned responsibility for all of its nuclear power activities to a single organization. In early 1986, TVA assembled a new management team for the TVA nuclear program. Because of difficulties stemming from federal pay cap restrictions, many of these managers were obtained on an interim basis through contract arrangements.

To provide a comprehensive recovery plan from the problems with its nuclear program and to answer the questions raised by the NRC, TVA developed a Nuclear Performance Plan. The plan has been used as a key reference in TVA's recovery efforts, being frequently updated as recovery efforts have progressed. Part of TVA's recovery plan was to eliminate temporary contract managers. TVA's efforts to hire permanent TVA employees have been successful, and temporary contract managers have now been virtually eliminated.

An independent review in 1989 of TVA's corporate support of its nuclear plants noted several beneficial practices and accomplishments, including the scope and depth of understanding that corporate management has of the problems existing in the nuclear area and the aggressive actions recently initiated to cause continued improvement in the performance of the nuclear organization. However, improvements were recommended in a number of areas. The most significant were certain problems associated with corporate technical support of nuclear power plant operations, resolution of long-standing maintenance problems at the nuclear plants (particularly at Browns Ferry), and a lack of necessary design controls resulting in significant rework of engineering design calculations to correct the problems. TVA is presently addressing these issues.

Nuclear Plant Regulation

A Construction Permit must be obtained from the NRC before constructing a nuclear plant, and an Operating License must be obtained from the NRC before a nuclear plant may be operated. Each of these steps requires the submission of extensive documentation, notice to the public, and opportunity for public participation in what sometimes become lengthy public hearings. In the past in the nuclear industry, such hearings and challenges through the courts have often resulted in delays in the operation of nuclear plants. Because of such delays and extensive regulatory requirements, estimates of costs to complete or recover nuclear plants have typically been unreliable. Activities related to nuclear plant construction and operation are constantly inspected by the NRC for compliance with detailed NRC regulations, and the NRC vigorously enforces those regulations. The NRC has the authority to enforce its regulations through several mechanisms including modification, suspension or revocation of licenses.

During TVA's nuclear recovery program, the NRC formed an Office of Special Projects to provide intense scrutiny and monitoring of TVA's nuclear recovery program. TVA's four volume Nuclear Performance Plan covering TVA corporate activities and Sequoyah, Browns Ferry, and Watts Bar Nuclear Plants has been submitted to the NRC. The NRC has completed its review of the recovery plan for TVA's corporate activities and Sequoyah, and it has completed its initial review of the recovery plan for Browns Ferry. TVA anticipates the completion of the NRC's initial review of the recovery plan for Watts Bar in the fourth quarter of 1989.

Sequoyah

Sequoyah Nuclear Plant is a two-unit plant located approximately 7.5 miles northeast of the city limits of Chattanooga, Tennessee, with pressurized water reactors supplied by Westinghouse Electric Corporation. Each unit is rated at 1148 megawatts net electrical output. TVA received an Operating License for Unit One in 1980, and the unit began commercial operation in 1981. TVA received an Operating License for Unit Two in 1981 and the unit began commercial operation in 1982. The Operating Licenses expire 40 years after issuance. The plant was designed, built and is operated by TVA. Because of questions raised about the qualification of electrical equipment to operate in the harshest possible environment for which the plant was designed, TVA voluntarily shut down both units in August 1985.

Prior to restarting the Sequoyah units, TVA extensively addressed organizational, programmatic and specific plant improvements. Unit Two was restarted in May 1988, and Unit One was restarted in November 1988. Since restart, both units have surpassed their previous records for continuous operation of 197 days for Unit One and 195 days for Unit Two.

In April 1989, the NRC completed a Systematic Assessment of Licensee Performance ("SALP") for Sequoyah for the period February 1988 to February 1989. Performance was evaluated in the functional areas of plant operations, radiological controls, maintenance/surveillance, emergency preparedness, security, engineering/technical support, and safety assessment/quality verification. A category rating of 1, 2, or 3 was assigned for each functional area. Summarized definitions for each rating are as follows: Category 1—Performance substantially exceeds regulatory requirements; reduced NRC attention may be appropriate. Category 2—Performance above that needed to meet regulatory

requirements; NRC attention may be maintained at normal levels. Category 3—Performance does not significantly exceed that needed to meet minimal regulatory requirements; NRC attention should be increased above normal levels. TVA received a rating of 2 for each functional area except that engineering/technical support was assigned a rating of 3, with an improving trend noted. The NRC found that TVA's performance in the engineering/technical support area was satisfactory for some of the programs; however, other programs were satisfactory only after corrections were made based on NRC input. Examples of these were inadequate seismic qualification and dedication of commercial grade parts for use in safety-related equipment, inadequate calculations and documentation to demonstrate that installed piping and supports met the plant design criteria, and improper installation of certain instrument sense lines. The NRC found that once problems or concerns were identified, TVA satisfactorily resolved the problems and completed the programs.

In an independent third-party review of Sequoyah activities in 1988, particular note was made, among other things, of the proactive management approach, and the upgraded facilities and improved preservation, material condition, and appearance of the plant. However, improvements were recommended in several areas, the most significant of which were more effective use of operating procedures applicable to emergency or abnormal situations; reducing the backlog of outstanding technical problems and other work; and improvements in communication across organizational lines concerning identified problems and deficiencies. TVA is presently addressing these issues.

Although additional work which TVA committed to perform as part of its nuclear recovery effort for Sequoyah remains to be done, this work will be accomplished along with other plant improvements in future refueling outages. This may result in several refueling outages taking somewhat more time than would be the case without such work.

Because of improvement in the operation of TVA's Sequoyah Nuclear Plant, in May 1989 the NRC notified TVA that both Sequoyah units have improved sufficiently to be removed from the NRC's list of plants that require close monitoring.

Browns Ferry

Browns Ferry Nuclear Plant is a three-unit plant located approximately 10 miles southwest of Athens, Alabama, with boiling water reactors supplied by General Electric Company. Each unit is rated at 1098 megawatts net electrical output. The plant was designed, built, and is operated by TVA. TVA received Operating Licenses for Units One, Two, and Three in 1973, 1974, and 1976, respectively. They began commercial operation in 1974, 1975, and 1977, respectively. The Operating Licenses for these units extend 40 years from initial issuance. Units One and Three were voluntarily shut down by TVA in March 1985 in response to technical and operational concerns. Unit Two was in a refueling outage at the time. Because of these and subsequently discovered concerns, TVA decided not to restart any Browns Ferry units until it was determined that the plant could be operated safely.

The last SALP by the NRC for Browns Ferry was for the March 1984 through May 1985 period. This was prior to the start of TVA's nuclear recovery program and the ratings generally reflected the marginally acceptable performance at Browns Ferry that resulted in the prolonged shutdown of the plant and extensive nuclear recovery program at Browns Ferry. In the nine categories rated, TVA received a rating of 3 in six categories and a rating of 2 in three categories. As a result of such performance, Browns Ferry was placed on the NRC's list of plants that require close monitoring.

As part of TVA's nuclear recovery effort, an in-depth review was conducted to determine what must be accomplished prior to restart, and to determine the root causes of the decline in regulatory compliance at Browns Ferry. TVA determined that the difficulties at Browns Ferry stemmed from three primary causes: (1) lack of a clear assignment of responsibility and authority to managers and their organizations to clearly establish accountability for performance, (2) insufficient management involvement and control in the workplace leading to a failure to adequately establish highest quality, and (3) failure to maintain consistently a documented design basis for the plant and to control consistently the plant's configuration with that basis.

The conditions at Browns Ferry have been addressed in several ways. TVA has restructured and strengthened the Browns Ferry organization with new management having proven nuclear experience by more accurately delineating responsibilities of its managers, and by strengthening supervisory knowledge of the plant through additional training. Management involvement and control have been enhanced, and communication with employees and training have been strengthened. Corrective action programs have been enhanced to improve timely and effective correction of conditions adverse to quality. Finally, a number of programs to identify actions to be completed prior to restart were established because of past deficiencies in design control. Some of the technical issues addressed include qualification of electrical equipment to operate in the harshest environment for which the plant was designed, documentation of design changes and plant modifications, review of suspended components for structural adequacy during an earthquake, fire protection, qualification for nuclear use of replacement parts, various electrical design control issues, and restart operational readiness programs. Wherever possible, in these efforts TVA has applied the knowledge gained from its successful resolution of similar issues in the recovery and startup of the Sequoyah units. In summary, TVA has taken extensive and significant steps to improve the management of its nuclear program at Browns Ferry. In January 1989, TVA completed refueling of Unit Two. As of September 1, 1989, TVA's schedule anticipates completing corrective actions necessary for the restart of Unit Two in the first quarter of 1990 and restarting the unit in mid-1990.

In an independent review of Browns Ferry in 1989, particular note was made of strengthened management standards and direction at all levels of the plant staff; however, further improvements were recommended in a number of areas, the most significant of which were planning, material support, coordination, and conduct of maintenance work activities; timely follow-up to prevent recurrence of identified plant problems, and improved training on industry events to avoid occurrence at Browns Ferry; and stabilizing management staffing, improving teamwork, and streamlining processes to promote efficiency and quality. TVA is presently addressing these issues.

From March 1985 through June 1989, the capitalized costs for improvements to Browns Ferry during the nuclear recovery program were $1.0 billion, including capitalized interest. As of June 1989, based on the inflation assumptions set forth in "Construction Expenditures," TVA's estimate of additional capitalized costs to restart Unit Two is approximately $300 million, including estimated capitalized interest of $50 million. TVA plans to restart Browns Ferry Unit Three following initial startup of Watts Bar Unit One. The schedules for Browns Ferry Unit Three and subsequent startup of Browns Ferry Unit One are currently being developed. The capitalized costs for returning these units to service, based on the inflation assumptions set forth in "Construction Expenditures", are anticipated to be in the range of $550 to $650 million for Unit Three and in the range of $650 to $800 million for Unit One, which includes estimated capitalized interest in the range of approximately $100 to $150 million for each unit. For budget planning purposes only, these amounts assume Units Three and One will be placed in service in October 1993 and October 1994, respectively. Although TVA believes that the significant problems on Unit Two have been identified, problem identification is not complete on Units One and Three. Therefore, assurance cannot be given that these estimates will not be significantly exceeded.

Watts Bar

Watts Bar Nuclear Plant is a two-unit power plant located approximately 50 miles northeast of Chattanooga, Tennessee, with pressurized water reactors supplied by Westinghouse Electric Corporation. Each unit is rated at 1160 megawatts net electrical output. The plant was designed, is being built, and will be operated by TVA. Construction permits were obtained for both units in January 1973. Construction Permits expire for Unit One in July 1991, and for Unit Two in December 1992. The Construction Permit for Unit Two may need to be extended; however, such extensions have been obtained in the past without difficulty.

The last SALP performed by the NRC for Watts Bar was prior to the start of TVA's nuclear recovery program. For that period (January 1985 through May 1985 for Unit One and March 1984 through May 1985 for Unit Two), TVA received a rating of 3 in licensing activities and a rating of 2 in the remaining ten categories rated.

As of June 30, 1989, nuclear plant construction in progress for TVA's entire system consisted of Unit One at Watts Bar. Although physical construction of Watts Bar Unit One was substantially complete in 1985, efforts to obtain a license from the NRC to operate it were delayed by the expression of numerous safety concerns by construction and other Watts Bar workers. Overall, TVA determined that while it had organizations, programs, processes and procedures in place to control plant design and construction activities, there were weaknesses identified in some of TVA's programs that were not in all cases adequately addressed. In some cases, TVA had not identified adequately the scope of weaknesses, identified root causes, implemented corrective actions, or had not provided adequate controls to prevent recurrence of problems.

TVA established a special Watts Bar Task Force in March 1986, consisting of senior personnel experienced in nuclear design and construction. The Task Force developed a list of corrective actions, except for those of a routine nature, to be completed before fuel load. However, toward the end of 1987, it was recognized that the issue discovery process at Watts Bar may not have identified all nonconforming items. Therefore, the Watts Bar Program Team was established to perform an integrated, systematic evaluation of Watts Bar and to make recommendations regarding the adequacy of Watts Bar design and construction. Some of the technical issues addressed include welding, design baseline verification, electrical issues, qualification of replacement parts, instrumentation lines, control room design, equipment seismic qualification, fire protection, quality assurance records and the prestart test program. Recently, as part of its problem identification process, TVA discovered some electrical cable damage in Unit Two which raised a possibility that similar cable damage may have occurred during construction of Unit One. TVA, in coordination with the NRC, is still evaluating the extent of the condition. Wherever possible, in these efforts to prepare Watts Bar for operation, TVA has applied the knowledge gained from its successful resolution of similar issues in the recovery and startup of the Sequoyah units.

TVA's plans are to obtain NRC approval and load fuel in Unit One in December 1990 and bring the unit into commercial operation in the fourth quarter of 1991. Total investment in Unit One at June 30, 1989, was $4.0 billion, including capitalized interest. Anticipated costs to complete as of June 30, 1989, based on the inflation assumptions set forth in "Construction Expenditures", are approximately $1.0 billion, including estimated capitalized interest of $400 million. However, due to numerous uncertainties, no assurance can be given that delays in bringing the unit into operation will not occur or that the estimated completion costs will not be significantly exceeded.

TVA anticipates the corrective actions on Watts Bar Unit Two to be similar to those of Watts Bar Unit One. The cost of Unit Two should be lower than Unit One because of the completion of corrective actions on common systems, and the resolution of many of the technical issues prior to the startup of Unit One.

On October 1, 1988, TVA suspended construction activities at Unit Two because of a reduction in the forecasted load growth and the unit is currently in layup pending a determination of when it will be required to meet future TVA power needs. As of May 1, 1989, construction of Unit Two was estimated to be approximately 85 percent complete based on an estimate of remaining man-hours for known work. Total investment in Unit Two at June 30, 1989, was $1.6 billion, including capitalized interest. The costs to complete Unit Two as of June 30, 1989, based on the inflation assumptions set forth in "Construction Expenditures", were anticipated to be in the range of $1.0 billion to $1.2 billion, including estimated capitalized interest in the range of $400 to $450 million. For budget planning purposes only, these amounts assume Unit Two will be placed in service in October 1995.

Bellefonte

Bellefonte Nuclear Plant is a two-unit power plant located approximately 59 miles southwest of Chattanooga with pressurized water reactors supplied by Babcock & Wilcox Company ("B&W") rated at 1165 megawatts net electrical output each. The plant was designed, has been built to its present level of completion, and will, under current plans, be operated by TVA. Construction Permits were obtained from the NRC for both units in December 1974.

TVA deferred construction activities on Unit Two at Bellefonte because of a reduction in forecasted load growth in October 1985. Construction activity was deferred on Unit One in July 1988. In July 1988, TVA notified the NRC of this action in accordance with the NRC's October 1987 Policy Statement on Deferred Nuclear Plants. TVA anticipates that the Construction Permits from the NRC, which expire July 1, 1994, for Unit One and July 1, 1996, for Unit Two, will need to be extended. Such extensions have been obtained in the past without difficulty.

While the design is similar to earlier B&W designs, the Bellefonte reactors are larger and include certain improvements over earlier designs. No other plants using this later design have obtained operating licenses in the United States. The only other unit of this design in the United States that has not been cancelled is in a deferred status, and another unit of a similar design is in West Germany. Since this particular design has not previously been licensed by the NRC, additional testing to validate certain analyses may be necessary before the unit is placed in commercial operation.

As of June 30, 1989, TVA had $4.3 billion invested in these units. Problems that may exist, upgrades that may be required, and the corrective actions that may be necessary in view of the problems discovered at other TVA designed and constructed plants will be described and submitted to the NRC at such time as efforts to restart construction may occur.

TVA currently estimates, based on the inflation assumptions set forth in "Construction Expenditures", the cost to complete these two units to be in the range of $2.7 to $4.1 billion, including estimated capitalized interest in the range of $1.0 to $1.6 billion. For budget planning purposes only, these amounts assume Units One and Two will be placed in service in October 1997 and October 1999, respectively. However, these estimates are under review and due to numerous uncertainties, no assurance can be given that the estimated range of completion costs will not be significantly exceeded.

Nuclear Units Without Schedules for Completion of Construction or Operation

Although TVA has not established a schedule for Browns Ferry Units One and Three, Watts Bar Unit Two and Bellefonte Units One and Two, under the medium load forecast, capacity equivalent to those units will be needed by the year 2000. Numerous risks and uncertainties that may significantly affect costs and schedules are inherent in bringing these units into operation, particularly in obtaining operating licenses for the Watts Bar and Bellefonte units. On an ongoing basis, TVA evaluates various alternatives and schedules to ensure its power needs are met in the most cost-effective manner. For example, TVA is studying alternatives to completing Bellefonte as a nuclear plant. Moreover, at least two firms have approached TVA with plans to purchase or lease Bellefonte and complete construction. TVA is evaluating these proposals but has not yet decided to alter its plans to complete and operate Bellefonte as a nuclear plant. If TVA were to decide to abandon or sell such units, the investment would be amortized over appropriate periods through rates or charged to retained earnings.

Nuclear Fuel

All nuclear fuel purchased to date by TVA is now held by SSEC, from which TVA leases its fuel for all TVA nuclear units (operating, under construction, and deferred). The book value of such fuel was $2,258 million as of June 30, 1989. The net book value of the nuclear fuel for each nuclear plant site as of June 30, 1989 (including interest component on the investment in fuel being prepared for use in the units), is as follows (in millions):

Sequoyah Units One and Two	$ 402
Browns Ferry Units One, Two, and Three	434
Watts Bar Units One and Two	253
Bellefonte Units One and Two	341
Uranium Inventories (unassigned)	828
Total	$2,258

SSEC's investment in the fuel being used in the Sequoyah units is being amortized and TVA's rental payments are accounted for as a fuel expense. The recovery of the investment in the fuel inventories is also dependent upon the future operation of TVA's nuclear units. If the nuclear fuel already fabricated is not used in the units intended, TVA will incur additional costs in preparing this fuel for use in other units or for sale.

SSEC borrows from the FFB the funds it needs to pay for the nuclear fuel, securing its loan with the assignment of lease payments to be made by TVA. At such time as FFB financing may no longer be available (see "The Refinancing Plan and Use of Proceeds"), it may be possible to continue the SSEC lease arrangement with another funding source replacing the FFB. In the absence of such arrangement, the lease will be terminated with TVA having the obligation to either purchase the fuel from SSEC or cause it to be purchased by a third party such as a privately financed leasing company. Other events could also result in termination of the lease such as (1) the occurrence of various circumstances described in the lease which would expose SSEC to potential liability for which indemnification by TVA under the lease would not be available (which includes changes in certain laws and regulations) and (2) the occurrence of events of default, as defined in the lease (which includes nonpayment of amounts owed by TVA and failure by TVA to perform or observe its contractual obligations under the lease). In the event of any such termination, TVA would be required to purchase, or cause a third party to purchase, all nuclear fuel held by SSEC at the then remaining net book cost.

Nuclear Waste

Spent Nuclear Fuel and High-Level Radioactive Waste

The Nuclear Waste Policy Act of 1982 (the "NWPA") provides that the federal government has the responsibility for the permanent disposal of spent nuclear fuel and high level radioactive waste but charges each nuclear power system with the responsibility for the cost of such permanent disposal. The NWPA also charges each nuclear power system with the primary responsibility for the interim storage of spent fuel and high-level waste and to pay the costs of doing so. The NWPA required each nuclear power system to enter into a disposal contract with DOE for such material. The contract requires each nuclear power system to pay a fee of one mill per kilowatt-hour on the net electricity generated by each of its reactors. TVA's spent fuel efforts will ensure that sufficient and economical storage is available to meet all of TVA's spent fuel and high-level waste storage requirements until DOE's permanent waste repository is prepared to accept TVA's spent fuel.

TVA presently has the capability to store its spent fuel and high-level waste at Sequoyah and Browns Ferry nuclear plants through the years 1998 and 2005, respectively. If necessary, TVA plans to extend storage capability through life-of-plant by the application of rod consolidation, high density racks or concrete storage casks. TVA estimates the cost of extending its spent fuel storage capacity at approximately $1 to $2 million per year per unit. This would require TVA to obtain appropriate license amendments from the NRC, which may result in notices of opportunity for public hearings. However, all of the above methods of extending storage capability have been licensed by the NRC at other facilities.

Low-Level Radioactive Waste

Disposal costs for low-level radioactive waste that results from normal operation of nuclear units have increased significantly in recent years and are expected to continue to rise. Pursuant to the Low-Level Radioactive Waste Policy Act, each state is responsible for disposal of low-level waste generated in that state. States may form regional compacts to jointly fulfill their responsibilities, and existing disposal sites in South Carolina, Nevada, and Washington are permitted to impose volume limits and surcharges on low-level waste from states not participating in a sited compact. The States of Tennessee and Alabama (where TVA nuclear plants are located) have joined with six other southeastern states to form the Southeast Compact Commission for Low-Level Radioactive Waste Management. This commission regulates the siting of new disposal facilities and the disposal of low-level waste within the southeastern states.

Low-level waste generators (such as TVA) located in the eight southeastern states are required to dispose of such waste at an existing facility in South Carolina until December 1992. The states participating in the Southeast Compact Commission have selected North Carolina as the host state for the next disposal site, and work is underway in that state to select, license, and construct a new disposal site to take the place of the South Carolina site. While this work is currently on schedule, TVA cannot predict the future availability of low-level waste disposal facilities or the cost of such disposal. Limited storage capacity is available at TVA nuclear plant sites, and any additional capacity required as a result of delays in the opening of the new facility will have to be provided by TVA.

Nuclear Insurance

The indemnification and limitation of liability plan afforded the United States nuclear industry by the Price-Anderson Act was extended for an additional 15 years in 1988, with certain provisions of the Price-Anderson Act now due to expire on August 1, 2002. The 1988 amendments to the Price-Anderson Act substantially increased the limit of liability from an accident at an NRC-licensed reactor to approximately $7.4 billion, composed of primary and secondary layers of financial protection.

The primary layer consists of nuclear liability insurance which is required to be maintained in the amount of $200 million for each plant site with units licensed to operate. Should the damages from a nuclear accident exceed a licensee's liability insurance coverage, a secondary layer of protection is triggered whereby each nuclear reactor licensee could be retrospectively assessed, for each of its nuclear units licensed to operate, an amount not to exceed $63 million per nuclear accident, but subject to a maximum annual assessment of $10 million per unit per accident. Any damages in excess of this amount in any year would be carried forward until fully paid. In addition, the Price-Anderson Act requires that this retrospective premium be adjusted by the NRC for inflation at least once every five years. Should the sum of all public liability and legal costs arising from any nuclear accident exceed the maximum amount of financial protection, each reactor licensee can be assessed an additional 5 percent of the $63 million assessment ($3.15 million) per unit. TVA maintains for each of its two nuclear plant sites with units licensed to operate, nuclear liability insurance in the amount of $200 million. The $10 million maximum annual assessment per unit serves to limit TVA's financial responsibility in the event of a nuclear accident to $50 million per year per accident.

NRC regulations require nuclear power plant licensees to obtain, and TVA has acquired, onsite property damage insurance coverage of $1.06 billion. Some of the nuclear property insurance may require the payment of retrospective premiums of up to approximately $54 million in the event that losses by another insured party or TVA exceed available funds.

In accordance with NRC regulations, the proceeds of nuclear property insurance are used first to ensure that the reactor is in safe and stable condition and that it can be maintained in a condition that prevents significant risk to the public. Next, the proceeds go for decontamination or, if necessary, decommissioning the reactor. Any excess proceeds insure against casualties to property.

Decommissioning

Since 1982, TVA has made investments in an internal fund for decommissioning nuclear plants. Investments in the fund, consisting of a portfolio of $1.15 billion face value of zero coupon bonds, mature between 1998 and 2004. These investments are carried on TVA's balance sheet at cost plus amortization of discount. TVA's investments in this fund are being recovered from ratepayers through an annual decommissioning charge, which was $16 million for the 12 month period ending June 30, 1989.

The latest estimates place the current cost of decommissioning each of the Browns Ferry units at $150 million, and each of the Sequoyah units at $115 million. TVA assumes that decommissioning funds will be needed for Browns Ferry by 2016 and Sequoyah by 2021 (the years in which the last

operating licenses expire at each site). Based on these dates and a 6 percent annual escalation rate, TVA projects that $2.5 billion and $1.7 billion, respectively, will be necessary to decommission the Browns Ferry and Sequoyah sites.

ENVIRONMENTAL MATTERS

TVA's activities are subject to various federal, state, and local environmental statutes and regulations. Major areas of regulation affecting TVA's activities include air pollution control, water pollution control, and management and disposal of solid and hazardous wastes. Because TVA is a federal agency, it is subject only to those state and local environmental requirements for which Congress has clearly waived federal agency immunity. Respecting the major environmental areas (air, water, and waste), limited waivers have been enacted by Congress. TVA's activities may also be subject to other, narrower environmental requirements or to environmental requirements which affect only federal activities.

TVA has incurred and continues to incur substantial capital expenditures and operating expenses to comply with environmental requirements. Because of the continually changing nature of these requirements, the total amount of these costs is not now determinable. It is anticipated that environmental requirements will become more stringent and that compliance costs will increase, perhaps by substantial amounts.

Air Pollution

Under the Clean Air Act, the United States Environmental Protection Agency (the "EPA") has promulgated national ambient air quality standards for certain air pollutants, including sulfur dioxide ("SO2"), particulate matter, and nitrogen oxides. Coal-fired generating units are major sources of these pollutants. TVA also operates other, smaller sources. The States of Alabama and Tennessee and the Commonwealth of Kentucky have promulgated implementation plans which regulate sources within their boundaries, including TVA sources, in order to achieve and maintain the national ambient standards. TVA has installed control equipment and employs control strategies to comply with applicable state-established emission limitations. TVA estimates that it has spent about $1.2 billion in capital costs on air pollution control activities and annual expenditures (amortization of control equipment and low sulfur coal premiums) range from $300 million to $350 million presently.

In July 1989, President Bush proposed comprehensive amendments to the Clean Air Act. One of the major titles in this legislation proposes additional requirements to control acid rain. Similar to other acid rain control measures pending before Congress, President Bush's proposal would require substantial capital expenditures and large increases in operating costs. The costs resulting from any such legislation cannot be accurately estimated at this time.

TVA is also working with the States of Alabama and Tennessee and the Commonwealth of Kentucky to resolve opacity problems which occur at several units. How these problems will be resolved and the cost and timing of such resolution cannot now be determined, but costs are not expected to be significant on an annual basis.

In March 1989, EPA proposed for comment alternative ways of regulating radionuclide air emissions from a number of source categories including nuclear power reactors, coal-fired fossil units, and uranium mining and milling operations. The most stringent alternative could result in substantial compliance costs by TVA and other potentially regulated sources. Such costs cannot be accurately estimated now and, in TVA's judgment, it appears unlikely that EPA will promulgate the most stringent alternative as the final regulation.

Water Pollution

Under the Clean Water Act, every point source which discharges pollutants into navigable waters must obtain a National Pollutant Discharge Elimination System ("NPDES") permit specifying the

allowable quantity and characteristics of the pollutants discharged. TVA's various point sources have received permits and all of its major generating units have NPDES permits. Compliance with NPDES requirements has necessitated substantial expenditures and may require additional, substantial expenditures in the future as NPDES permits come up for renewal and applicable requirements are made more stringent.

The Clean Water Act allows the permitting authority to establish thermal limits less stringent than the water quality criteria if the discharger can demonstrate that the alternate limit will assure protection and propagation of a balanced, indigenous aquatic population. TVA submitted such a demonstration to EPA and Tennessee for its John Sevier Fossil Plant in 1977. The plant was issued, on an interim basis, the discharge limit which TVA requested be established as the final limit. In July 1989, Tennessee informed TVA that it was rejecting the demonstration and that it would initiate a proceeding to establish an appropriate thermal limit. TVA has appealed this determination and is continuing to negotiate with Tennessee. Resolution of this issue is uncertain. If TVA does not prevail, it could be required to erect cooling towers at the plant. Preliminary capital cost estimates for cooling towers range from $100 million to $150 million. If cooling towers are erected, TVA may also be required to remove a detention dam near the plant's intake structure and, possibly, sediment behind the dam. Depending on whether this sediment is hazardous due to discharges from non-TVA facilities, removing and disposing of this sediment could involve substantial costs.

Solid and Hazardous Waste Management

Under the Resource Conservation and Recovery Act ("RCRA"), the storage, transportation, and disposal of hazardous wastes are regulated by EPA and the states. RCRA also allows EPA and the states to regulate solid wastes and the states have detailed permitting programs for this. TVA's power program operates a hazardous waste storage facility (a small warehouse) for which an RCRA permit has been received and for which a further RCRA permit is pending. TVA has detailed procedures in place that comply with all applicable requirements for the management of hazardous wastes. In addition, TVA has instituted a restricted award list for hazardous waste disposal contractors under which such contractors' financial status, compliance history, and physical facilities and operations are reviewed before they are allowed to dispose of any of the hazardous wastes generated by TVA facilities. TVA does not itself operate any hazardous waste disposal or treatment facilities. TVA has obtained or is in the process of obtaining solid waste disposal permits for the solid waste disposal areas *(e.g.,* fly ash, scrubber sludge, demolition materials, asbestos) it operates at its plant sites. TVA's costs in this area have not been substantial but applicable requirements are constantly changing and are expected to become more stringent. If those requirements evolve to the point that previously disposed ash must be removed, significant expenditures could be involved.

Under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), the release and cleanup of hazardous substances are regulated. Persons who generate, store, transport, or dispose of the substances can be held responsible for the cost of such cleanups regardless of when the substances were generated and whether or not the substances were properly handled at the time of disposal by the generator. Liability under CERCLA is viewed as joint and several. TVA, in a manner similar to other industries and power systems, has generated hazardous substances which were disposed of at off-site disposal areas. Some hazardous substances were also disposed of at TVA facilities which generated them. As required by CERCLA, TVA has reviewed and is reviewing its power system facilities and has not yet identified any areas where hazardous substances were disposed of by TVA in amounts which are likely to generate substantial cleanup costs or which appear to have had other than a minor impact on the environment. TVA cannot meaningfully evaluate its exposure to potential liability for cleanup of off-site disposal areas. To date, TVA has been identified as a potentially responsible party at only two off-site disposal areas and TVA's potential share of any cleanup costs assuming its liability is established would not be substantial.

Miscellaneous

Polychlorinated biphenyls ("PCBs") have been widely used as insulating fluids in electric equipment *(e.g.,* transformers and capacitors). Use of such equipment and the cleanup of released PCBs

are regulated by EPA under the Toxic Substances Control Act. The TVA power system uses over 50,000 pieces of equipment which contain some level of PCBs. Most of this equipment can continue to be operated under EPA's PCB regulations for the remainder of their useful lives, but TVA is phasing out such equipment as a matter of policy. The cost of phasing out all of this equipment could exceed $100 million (equipment replacement and disposal costs) but cannot be accurately determined at this time. TVA has in place detailed procedures to conform its operations to EPA's PCB regulations, and it has not incurred substantial costs in this area.

As a federal agency, TVA is required to consider the potential environmental effects of major federal actions affecting the quality of the human environment under the National Environmental Policy Act (the "NEPA"), and implementing regulations and to make these evaluations available to the public. Other federal agencies are also required to consider the potential environmental effects of major federal actions within their control which, among other actions, includes the issuance of permits or licenses relating to the construction or operation of electric generation facilities. NEPA does not dictate that a particular decision be made, but the NEPA review process can take 12 to 18 months to complete on the average for major proposals for which environmental impact statements are prepared. TVA has incorporated the NEPA review process into its decisionmaking process. NEPA-related costs are incurred continuously but not in substantial amounts.

INSURANCE

It is the policy of TVA not to carry disaster or public liability insurance except as may be required or appropriate with respect to nuclear facilities. Liability for service-connected injuries to employees is governed by the Federal Employees' Compensation Act. See "Nuclear Power Program—Nuclear Insurance" and Note 12 of Notes to Financial Statements for additional information with respect to insurance.

MANAGEMENT

TVA is administered by a Board of Directors composed of three persons appointed by the President and confirmed by the Senate. The Board and selected Officers, their ages, their years of employment with TVA and principal occupations for the past five years are as follows:

Name and Title	Age	Year Commenced Employment	Year Term Expires
Marvin Runyon Chairman of the Board	65	1988	1996
Charles H. Dean, Jr. Director	64	1981	1990
John B. Waters Director	60	1984	1993
William F. Willis Executive Vice President and Chief Operating Officer	55	1960	
Oliver D. Kingsley, Jr. Senior Vice President of Nuclear Power	46	1988	
William F. Malec Senior Vice President and Chief Financial Officer	49	1989	
John T. Shields Senior Vice President of Resource Development	54	1965	
Robert C. Steffy, Jr. Senior Vice President of Power	47	1970	
Edward S. Christenbury General Counsel and Secretary	48	1987	

Mr. Runyon was appointed as Chairman of the Board in January 1988. Prior to his current position, he served as President and Chief Executive Officer of Nissan Motor Manufacturing Corporation U.S.A. (1980-1988).

Mr. Dean was appointed to the Board in June 1981. He is a professional engineer with over thirty years experience in utilities.

Mr. Waters was appointed to the Board in August 1984. He is an attorney with twenty-three years of legal experience in the State of Tennessee.

Mr. Willis was named Executive Vice President and Chief Operating Officer in May 1988. Prior to his current position, he served as TVA's General Manager (1979-1988).

Mr. Kingsley was named as Senior Vice President of Nuclear Power in November 1988. Prior to his current position, he served as Vice President, Nuclear Operations for System Energy Resources, Inc. (Mississippi Power and Light Company) (1985-1988) and Director, Nuclear Plant Support, Southern Company Services (1984-1985).

Mr. Malec was named Senior Vice President and Chief Financial Officer in April 1989. Prior to his current position, he served as Treasurer of Central and South West Corporation (1978-1989).

Mr. Shields was named Senior Vice President of Resource Development in July 1988. Prior to his current positon, he served as TVA's Manager of Agricultural and Chemical Development (1983-1988).

Mr. Steffy was named Senior Vice President of Power in July 1988. Prior to his current position, he served as TVA's Manager of Power (1986-1988) and Deputy Manager of Power (1983-1986).

Mr. Christenbury assumed the position of General Counsel of TVA in January 1987. Prior to his current position, he was an Assistant General Counsel at the Nuclear Regulatory Commission (1980-1987).

EMPLOYEES

TVA currently employs about 25,800 employees, of which 10,850 are trades and labor employees. Neither the federal labor laws covering most private sector employers, nor those covering most federal agencies are applicable to TVA; however, the Board has a longstanding policy of recognizing and dealing with recognized representatives of its employees. TVA employees are prohibited by federal law from engaging in strikes against TVA. About 84 percent of TVA's employees are in bargaining units, all of which are covered by an existing collective bargaining agreement. TVA negotiates with the Tennessee Valley Trades and Labor Council (comprised of 15 craft unions) on four labor contracts covering its trades and labor craft employees and with the Salary Policy Employee Panel (comprised of 5 unions) over the contract covering its non-trades and labor employees. There are no expiration dates in these agreements, and negotiations are generally held annually and the contracts are subject to reopening or cancellation. Unresolved disputes over rates of pay for trades and labor employees are resolved by binding decisions of the Secretary of Labor, while such pay disputes for other represented employees are resolved through binding arbitration.

Salaries of regular TVA employees are limited by a federal pay cap (Executive Level IV, currently $80,700). This had led in the past to difficulties in the recruitment and retention of top management talent, and continues to be an issue which TVA must face in its recruitment and retention efforts. TVA has addressed this issue by developing and implementing supplementary compensation arrangements, which have substantially reduced the impact of the pay cap. In TVA's opinion, the implementation of these arrangements is within TVA's legal authority. The General Accounting Office (the "GAO") has expressed the opinion that these arrangements are not within TVA's legal authority. However, GAO has no authority to issue binding legal opinions on this matter or to stop any TVA payments. Congress is aware of TVA's supplemental compensation arrangements and has not taken any action that would undermine TVA's position that the arrangements are within its legal authority.

CERTAIN PROVISIONS OF THE TENNESSEE VALLEY AUTHORITY ACT

The following summarizes certain provisions of the Act.

Payments in Lieu of Taxes

TVA is not subject to federal income taxes or to taxation by states or their subdivisions. However, the Act requires payments in lieu of taxes by TVA to states and counties in which it operates, in amounts equal to 5 percent of its gross revenues from the sale of power (exclusive of sales to federal agencies not for resale). In addition, the municipal distributors make tax-equivalent payments, and the cooperative systems pay such taxes as are required by the various states.

Payments to the Treasury

The Act requires TVA to make certain payments into the Treasury each year from Net Power Proceeds in excess of those required for debt service as a return on and reduction of the Appropriation Investment. Net Power Proceeds are defined as the remainder of TVA's Gross Power Revenues after deducting the cost of operating, maintaining, and administering its power properties (including multiple-purpose properties in the proportion that multiple-purpose costs are allocated to power) and payments to states and counties in lieu of taxes, but before deducting depreciation accruals or other charges representing the amortization of capital expenditures, plus the net proceeds of the sale or other disposition of any power facility or interest therein. See Note 9 of Notes to Financial Statements.

The Act further provides that by March 31 of each year TVA shall pay into the Treasury the proceeds derived by TVA during the preceding fiscal year from all its activities, excepting such part as in the opinion of the Board is necessary in the conduct of certain specified activities including its business in generating, transmitting, and distributing electric energy, plus a continuing fund of $1 million. This provision is subject, however, to a further provision in the Act permitting TVA to pledge and use its Net Power Proceeds for payment of the principal of and interest on its Evidences of Indebtedness, notwithstanding any other provision of law. Under the Basic Resolution, TVA pledges to and will apply Net Power Proceeds as set forth under "The Basic Resolution; Power Bonds—Application of Net Power Proceeds".

Acquisition of Real Estate

The Act empowers TVA to acquire real estate in the name of the United States of America by purchase or by exercise of the right of eminent domain, "and thereupon all such real estate shall be entrusted to the Corporation as the agent of the United States to accomplish the purposes of [the Act]". Since nearly all of TVA's properties, including powerhouses and transmission line rights of way, constitute real estate, title to which is held in the name of the United States and entrusted to TVA as agent of the United States, all references in this Offering Circular to "TVA properties" and the like, and to the amounts invested therein, should be read and construed in the light of this provision of the Act.

THE BASIC RESOLUTION; POWER BONDS

TVA's Power Bonds are issued pursuant to authority vested in TVA by the Act and pursuant to the Basic Resolution. At June 30, 1989, TVA had outstanding $18.1 billion principal amount of Power Bonds issued pursuant to the Basic Resolution and resolutions supplemental thereto, including $300 million of Power Bonds held by the FFB that are being redeemed under in-substance defeasance arrangements. Bankers Trust Company, New York, New York, acts as Trustee (the "Trustee") for holders of the Power Bonds under the Basic Resolution.

Power Bonds may be issued only to provide capital for TVA's Power Program (including refunding any Evidences of Indebtedness issued for like purposes) and only as authorized by law at the time of issuance. Power Bonds are payable as to both principal and interest solely from Net Power Proceeds and are not obligations of or guaranteed by the United States of America. Power Bonds of each series must be further authorized by Supplemental Resolution filed with the Trustee.

TVA intends from time to time to issue New Power Bonds with maturities and on terms determined in light of market conditions at the time of sale. The New Power Bonds may be sold to dealers or underwriters, who may resell the New Power Bonds in public offerings or otherwise. In addition, New Power Bonds may be sold by TVA directly or through agents.

The specific aggregate principal amount, maturity, interest rate or method for determining such rate, interest payment dates, if any, purchase price to be paid to TVA, any terms for redemption or other special terms, form and denomination of New Power Bonds, information as to any stock exchange listing and the names of any dealers, underwriters or agents, together with a description of any amendments or supplements to the Basic Resolution in connection with the sale of New Power Bonds being offered at a particular time will be set forth in an Offering Circular Supplement, together with the terms of offering of such New Power Bonds.

The following summary of certain provisions of the Basic Resolution does not purport to be complete and is qualified in its entirety by reference to the full text of the Basic Resolution.

Application of Net Power Proceeds

Section 2.3 of the Basic Resolution provides as follows:

> Net Power Proceeds shall be applied, and the Corporation hereby specifically pledges them for application, first to payments due as interest on Bonds, on Bond Anticipation Obligations, and on any Evidences of Indebtedness issued pursuant to Section 2.5 which rank on a parity with Bonds as to interest; to payments of the principal due on Bonds for the payment of which other provisions have not been made; and to meeting requirements of sinking funds or other analogous funds under any Supplemental Resolutions. The remaining Net Power Proceeds shall be used only for:
>
> (a) Required interest payments on any Evidences of Indebtedness issued pursuant to Section 2.5 which do not rank on a parity with Bonds as to interest.
>
> (b) Required payments of or on account of principal of any Evidences of Indebtedness other than Bonds.
>
> (c) Minimum payments into the United States Treasury required by the Act in repayment of and as a return on the Appropriation Investment.

(d) Investment in Power Assets, additional reductions of the Corporation's capital obligations, and other lawful purposes related to the Power Program; *provided, however,* that payments into the United States Treasury in any fiscal year in reduction of the Appropriation Investment in addition to the minimum amounts required for such purpose by the Act may be made only if there is a net reduction during such year in the dollar amount of outstanding Evidences of Indebtedness issued for capital purposes, and only to such extent that the percentage of aggregate reduction in the Appropriation Investment during such year does not exceed the percentage of net reduction during the year in the dollar amount of outstanding Evidences of Indebtedness issued for capital purposes.

Section 2.4 of the Basic Resolution provides as follows:

The Corporation, having first adopted a Supplemental Resolution authorizing the issuance of a Series of Bonds and pending such issuance, may issue Bond Anticipation Obligations and renewals thereof (including Interim Obligations to the Secretary of the Treasury) to be paid from the proceeds of such Series of Bonds when issued or from other funds that may be available for that purpose.

Section 2.5 of the Basic Resolution provides as follows:

To assist in financing its Power Program the Corporation may issue Evidences of Indebtedness other than Bonds and Bond Anticipation Obligations, which may be payable out of Net Power Proceeds subject to the provisions of Section 2.3 hereof, but no such other Evidences of Indebtedness shall rank on a parity with or ahead of the Bonds as to payments on account of the principal thereof or rank ahead of the Bonds as to payments on account of the interest thereon.

Rate Covenant

Section 3.2 of the Basic Resolution provides as follows:

The Corporation shall fix, maintain, and collect rates for power sufficient to meet in each fiscal year the requirements of that portion of the present subsection (f) of section 15d of the Act which states as follows:

> The Corporation shall charge rates for power which will produce gross revenues sufficient to provide funds for operation, maintenance, and administration of its power system; payments to States and counties in lieu of taxes; debt service on outstanding bonds, including provision and maintenance of reserve funds and other funds established in connection therewith; payments to the Treasury as a return on the appropriation investment pursuant to subsection (e) hereof; payment to the Treasury of the repayment sums specified in subsection (e) hereof; and such additional margin as the Board may consider desirable for investment in power system assets, retirement of outstanding bonds in advance of maturity, additional reduction of appropriation investment, and other purposes connected with the Corporation's power business, having due regard for the primary objectives of the Act, including the objective that power shall be sold at rates as low as are feasible.

For purposes of this Resolution, "debt service on outstanding bonds," as used in the above provision of the Act, shall mean for any fiscal year the sum of all amounts required to be (a) paid during such fiscal year as interest on Evidences of Indebtedness, (b) accumulated in such fiscal year in any sinking or other analogous fund provided for in connection with any Evidences of Indebtedness, and (c) paid in such fiscal year on account of the principal of any Evidences of Indebtedness for the payment of which funds will not be available from sinking or other analogous funds, from the proceeds of refunding issues, or from other sources; *provided, however,* that for purposes of clause (c) of this definition Bond Anticipation Obligations and renewals thereof shall be deemed to mature in the proportions and at the times provided for paying or setting aside funds for the payment of the principal of the authorized Bonds in anticipation of the issuance of which such Bond Anticipation Obligations were issued.

The rates for power fixed by the Corporation shall also be sufficient so that they would cover all requirements of the above-quoted provision of subsection (f) of section 15d of the Act if, in such requirements, there were substituted for "debt service on outstanding bonds" for any fiscal

year the amount which if applied annually for 35 years would retire, with interest at the rates applicable thereto, the originally issued amounts of all series of Bonds and other Evidences of Indebtedness, any part of which was outstanding on October 1 of such year.

Covenant for Protection of Bondholders' Investment

Under the Act and the Basic Resolution, TVA must, in each successive five-year period beginning October 1, 1960, use either for the reduction of its capital obligations (including Evidences of Indebtedness and the Appropriation Investment) or for investment in Power Assets an amount of Net Power Proceeds at least equal to the sum of (1) depreciation accruals and other charges representing the amortization of capital expenditures and (2) the net proceeds from any disposition of power facilities.

Depreciation

The Basic Resolution requires TVA to accrue, in accordance with a recognized method, annual amounts for depreciation of its power properties (except land and other nondepreciable property) which will amortize their original cost less anticipated net salvage value within their expected useful lives. TVA has provided allowances for depreciation of its power properties (except land and other nondepreciable property) on a straight-line basis during their expected useful lives.

Issuance of Additional Bonds and Other Evidences of Indebtedness

The Act presently limits the issuance of Evidences of Indebtedness by TVA to a total of $30 billion outstanding at any one time to assist in financing TVA's power program (and for refunding). At June 30, 1989, TVA had approximately $18.9 billion of outstanding Evidences of Indebtedness including $300 million of Power Bonds held by the FFB that are being redeemed under in-substance defeasance arrangements. The Basic Resolution permits the issuance of Power Bonds only to provide capital for TVA's power program, including the refunding of any Evidences of Indebtedness issued for that purpose.

Power Bonds, the terms and conditions of which may not be inconsistent with the Basic Resolution, must also be authorized by Supplemental Resolution filed with the Trustee.

The issuance of Power Bonds is limited as follows by the Basic Resolution:

Each Supplemental Resolution authorizing the issuance of Power Bonds must contain a finding by the Board that after the Power Bonds authorized thereby have been issued Gross Power Revenues will be adequate to meet the requirements of the Basic Resolution with respect to rates and the application of depreciation accruals. These requirements are described under "The Basic Resolution; Power Bonds—Rate Covenant" and "Covenant for Protection of Bondholders' Investment."

The amount of Power Bonds outstanding may not be increased unless net power income (after interest expense and depreciation charges but before payments as a return on or in reduction of the appropriation investment) for the latest five fiscal years has aggregated at least $200 million. Moreover, that minimum requirement is increased by $15 million for each ¼ percent (or major fraction thereof) over an average of 3¼ percent for those five years of the October 1 average interest rate payable by the United States Treasury upon its total marketable public obligations. TVA had aggregate net power income for the five fiscal years ended September 30, 1988 of $1.4 billion.

Pending the issuance of Power Bonds authorized by a Supplemental Resolution, Bond Anticipation Obligations and renewals thereof (including Interim Obligations to the Secretary of the Treasury) may be issued, to be paid from the proceeds of such Power Bonds when issued or from other funds that may be available for that purpose.

Evidences of Indebtedness other than Power Bonds and Bond Anticipation Obligations may also be issued to assist in financing TVA's power program. They may be payable out of Net Power Proceeds subject to the provisions of Section 2.3 of the Basic Resolution. They may not rank on a parity with or ahead of the Power Bonds as to principal or ahead of them as to interest.

Mortgaging and Disposal of Power Properties

TVA may not mortgage any part of its power properties and may not dispose of all or any substantial portion of such properties unless provision is made for a continuance of the interest, principal and sinking fund payments due and to become due on all outstanding Evidences of Indebtedness, or for the retirement of such Evidences of Indebtedness.

Modifications of Resolutions and Outstanding Bonds

The Basic Resolution provides for amendments to it, to any Supplemental Resolution, and to any outstanding Power Bonds. In summary, amendments of the respective rights and obligations of TVA and the bondholders may be made with the written consent of the holders of at least 66⅔ percent in principal amount of the outstanding Power Bonds to which the amendment applies; but changes in the maturity, principal amount, redemption premium, or rate of interest or maturity of any interest installment, with respect to any Power Bond, or in the above percentage for any such consent, cannot be made without the consent of the holder of such Power Bonds.

In addition, TVA may amend the Basic Resolution or any Supplemental Resolution without the consent of the bondholders in order (1) to close the Basic Resolution against the issuance of additional Power Bonds or to restrict such issuance by imposing additional conditions or restrictions; (2) to add other covenants and agreements to be observed by TVA or to eliminate any right, power or privilege conferred upon TVA by the Basic Resolution; (3) to modify any provisions to release TVA from any of its obligations, covenants, agreements, limitations, conditions or restrictions, provided that such modification or release shall not become effective with respect to any Power Bonds issued prior to the adoption of such amendment; or (4) to correct any defect, ambiguity or inconsistency in, or to make provisions in regard to matters or questions arising under, the Basic Resolution or any Supplemental Resolution, so long as such amendments are not contrary to, or inconsistent with, the Basic Resolution or such Supplemental Resolution.

Copies in reasonable quantity of the Act and the Basic Resolution may be obtained upon request directed to Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902, Attention: Treasurer.

INDEPENDENT ACCOUNTANTS

The financial statements of TVA at September 30, 1988, and 1987 and for each of the three fiscal years in the period ended September 30, 1988, appended hereto as part of the Offering Circular have been audited by Coopers & Lybrand, independent accountants, as set forth in their report dated November 30, 1988, which report appended hereto includes an explanatory paragraph citing uncertainties concerning the completion of the nuclear power program.

* * * * * *

Any statements in this Offering Circular involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact. This Offering Circular is not to be construed as a contract or agreement with the purchaser of any of the New Power Bonds.

This Offering Circular has been approved by resolution of the Board of Directors of the Tennessee Valley Authority.

Tennessee Valley Authority

By: /s/ Marvin Runyon
Marvin Runyon
Chairman of the Board

Dated October 17, 1989

Report of Independent Accountants

To the Board of Directors of
Tennessee Valley Authority

We have audited the accompanying balance sheets (power program and all programs) of Tennessee Valley Authority as of September 30, 1988 and 1987, and the related statements of income and retained earnings (power program), net expense and accumulated net expense (nonpower programs) and cash flows (power program and all programs) for each of the three years in the period ended September 30, 1988. These financial statements are the responsibility of Tennessee Valley Authority's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards promulgated by the American Institute of Certified Public Accountants and the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the power program and all progams of Tennessee Valley Authority as of September 30, 1988 and 1987, and the results of operations of the power program and nonpower programs and cash flows of the power program and all programs for each of the three years in the period ended September 30, 1988, in conformity with generally accepted accounting principles.

As discussed in Note 3 to the financial statements, there are uncertainties concerning the completion of the nuclear power program of Tennessee Valley Authority. Certain completed nuclear production plant is not in operation due to continuing efforts to comply with requirements of the Nuclear Regulatory Commission. Certain nuclear production plant included in construction in progress is considered substantially complete by Tennessee Valley Authority, but has not undergone fuel loading and low power testing due to certain unresolved safety issues. Construction of additional nuclear production plant, which is partially complete, has been deferred. The Tennessee Valley Authority is reviewing its plans to return to service all completed nuclear production plant and to complete construction of and place in service all remaining nuclear production plant. Upon completion of this review, there is no certainty that Tennessee Valley Authority will return to service or complete all nuclear production plant. Also, there is no certainty that the Nuclear Regulatory Commission will approve the return to service or initial operation of the nuclear production plant. Under such circumstances, the Board of Directors may elect not to recover from the ratepayers all costs associated with the nuclear power program. The ultimate outcome of these matters cannot be determined at this time.

COOPERS & LYBRAND

Knoxville, Tennessee
November 30, 1988

TENNESSEE VALLEY AUTHORITY
(A Corporation Wholly Owned by the United States of America)
Balance Sheets June 30, 1989 (unaudited), September 30, 1988 and 1987

ASSETS

	Power program			All programs		
	June 30, 1989 (unaudited)	September 30 1988	1987	June 30, 1989 (unaudited)	September 30 1988	1987
	(Millions)					
PROPERTY, PLANT, AND EQUIPMENT...						
Completed plant						
Other than nuclear						
Multipurpose dams; note 2	$ 592	$ 585	$ 564	$ 1,480	$ 1,473	$ 1,443
Single-purpose dams	403	402	400	403	402	400
Steam production plant	4,333	4,231	4,190	4,333	4,231	4,190
Other electric plant	3,207	3,188	3,034	3,207	3,188	3,034
Other plant	—	—	—	373	376	372
	8,535	8,406	8,188	9,796	9,670	9,439
Less accumulated depreciation and depletion; note 1	3,368	3,222	3,038	3,642	3,487	3,291
	5,167	5,184	5,150	6,154	6,183	6,148
Nuclear production plant; note 3	3,171	3,147	3,022	3,171	3,147	3,022
Less accumulated depreciation; note 1	819	749	670	819	749	670
	2,352	2,398	2,352	2,352	2,398	2,352
Completed plant, net	7,519	7,582	7,502	8,506	8,581	8,500
Construction in progress; note 4						
Nuclear plant construction; note 3	4,760	5,881	8,402	4,760	5,881	8,403
Other construction; note 4	488	467	375	594	565	479
	5,248	6,348	8,777	5,354	6,446	8,882
Deferred nuclear generating units; note 3	5,884	4,260	793	5,884	4,260	793
Capital lease assets; note 5						
Nuclear fuel	2,255	2,172	1,831	2,255	2,172	1,831
Other facilities	246	249	247	246	249	247
	2,501	2,421	2,078	2,501	2,421	2,078
Nuclear fuel	687	691	875	687	691	875
Less accumulated amortization; note 1	684	684	670	684	684	670
Nuclear fuel, net	3	7	205	3	7	205
Total	21,155	20,618	19,355	22,248	21,715	20,458
INVESTMENT FUNDS						
at amortized cost; note 6	247	922	710	247	922	710
Other investments	590	—	—	590	—	—
Total	837	922	710	837	922	710
CURRENT ASSETS						
Cash	165	10	7	264	95	86
Temporary investments	377	—	—	377	—	—
Accounts receivable	645	693	695	653	705	713
Inventories, principally at average cost	493	491	571	507	501	581
Total	1,680	1,194	1,273	1,801	1,301	1,380
DEFERRED CHARGES AND OTHER ASSETS						
Loans and other long-term receivables	265	293	298	305	339	346
Unamortized cost of canceled nuclear generating units; note 1	1,683	1,889	2,135	1,683	1,889	2,135
Deferred nuclear recovery costs; note 1	726	654	284	726	654	284
Other deferred charges, net	168	254	262	169	254	262
Total	2,842	3,090	2,979	2,883	3,136	3,027
Total assets	$26,514	$25,824	$24,317	$27,769	$27,074	$25,575

Notes 1 through 14 are an integral part of the financial statements.

TENNESSEE VALLEY AUTHORITY
(A Corporation Wholly Owned by the United States of America)
Balance Sheets June 30, 1989 (unaudited), September 30, 1988 and 1987

CAPITALIZATION AND LIABILITIES

	Power program			All programs		
	June 30, 1989 (unaudited)	September 30 1988	1987	June 30, 1989 (unaudited)	September 30 1988	1987
	(Millions)					
PROPRIETARY CAPITAL						
Appropriation investment; note 7						
Congressional appropriations	$ 1,419	$ 1,419	$ 1,419	$ 4,697	$ 4,594	$ 4,491
Transfers of property from other Federal agencies, net	24	24	24	62	61	61
	1,443	1,443	1,443	4,759	4,655	4,552
Less repayments to General Fund of the U.S. Treasury; note 9	675	675	655	717	717	697
Appropriation investment	768	768	788	4,042	3,938	3,855
Less requirement for repayment of appropriation investment	15	—	—	15	—	—
Retained earnings reinvested in the power program	3,027	2,740	2,396	3,027	2,740	2,396
Accumulated net expense of nonpower programs	—	—	—	(2,079)	(2,003)	(1,892)
Total	3,780	3,508	3,184	4,975	4,675	4,359
LONG-TERM DEBT						
Principal; note 10	17,805	17,405	17,505	17,805	17,405	17,505
Less unamortized discount; note 1	2	2	3	2	2	3
Total	17,803	17,403	17,502	17,803	17,403	17,502
OTHER LIABILITIES						
Capital lease obligations; note 5	2,497	2,418	2,076	2,497	2,418	2,076
Decommissioning of nuclear plant; note 1	204	166	129	204	166	129
Provision for other payments	117	93	61	117	93	61
Total	2,818	2,677	2,266	2,818	2,677	2,266
CURRENT LIABILITIES						
Short-term debt; note 10	765	756	411	765	756	411
Current maturities of long-term debt	—	500	—	—	500	—
Current portion of capital lease obligations; note 5	4	3	2	4	3	2
Accounts payable	905	477	511	944	526	562
Payrolls and leave accrued	70	103	74	91	137	106
Interest accrued	369	397	367	369	397	367
Total	2,113	2,236	1,365	2,173	2,319	1,448
COMMITMENTS AND CONTINGENCIES; notes 4, 8, 12, and 14						
Total capitalization and liabilities	$26,514	$25,824	$24,317	$27,769	$27,074	$25,575

Notes 1 through 14 are an integral part of the financial statements.

TENNESSEE VALLEY AUTHORITY
POWER PROGRAM

STATEMENTS OF INCOME AND RETAINED EARNINGS
For the Twelve Months Ended June 30, 1989 (unaudited), and the Years Ended September 30, 1988, 1987, and 1986

	June 30, 1989 (unaudited)		1988		1987		1986	
	kWh	Amount	kWh	Amount	kWh	Amount	kWh	Amount
				(Millions)				
OPERATING REVENUES								
Sales of electric energy								
Municipalities and cooperatives	92,731	$4,121	91,392	$4,100	90,813	$3,974	84,884	$3,487
Federal agencies; note 13	2,096	442	2,011	611	2,009	596	2,027	518
Industries	16,050	524	15,141	513	14,530	502	14,983	556
Electric utilities	498	24	517	26	439	20	426	18
Interdivisional	257	11	266	12	261	12	274	13
Total sales of electric energy	111,632	5,122	109,327	5,262	108,052	5,104	102,594	4,592
Rents and other miscellaneous revenues		60		60		52		46
Total operating revenues		5,182		5,322		5,156		4,638
OPERATING EXPENSES								
Production; note 8								
Fuel		1,281		1,240		1,163		1,313
Other		784		1,035		979		802
Transmission		44		47		47		48
Customer accounts and consumer services		11		88		141		25
Research, development, and demonstrations of power use		70		97		100		77
General and administrative		316		363		322		252
Payments in lieu of taxes		236		225		203		196
Amortization of loss on canceled nuclear generating units and deferred recovery costs; note 1		260		32		32		—
Provision for depreciation		335		323		313		305
Total operating expenses		3,337		3,450		3,300		3,018
Operating income		1,845		1,872		1,856		1,620
OTHER INCOME AND DEDUCTIONS								
Interest income		96		92		68		51
Abandonment of uranium properties		—		—		(22)		—
Amortization related to loss on canceled nuclear generating units; note 1		—		(217)		(185)		(226)
Other, net		(40)		(30)		(33)		(21)
Total other income and deductions		56		(155)		(172)		(196)
Income before interest charges		1,901		1,717		1,684		1,424
INTEREST CHARGES								
Interest on long-term debt		1,818		1,795		1,721		1,658
Other interest expense		40		28		28		33
Allowance for borrowed funds used during construction; note 1		(282)		(525)		(523)		(543)
Amortization of long-term debt discount and expense; note 1		5		6		7		2
Net interest charges		1,581		1,304		1,233		1,150
NET INCOME		320		413		451		274
Return on appropriation investment; note 9		68		69		74		86
Increase in retained earnings reinvested		252		344		377		188
Retained earnings reinvested at beginning of period		2,775		2,396		2,019		1,831
Retained earnings reinvested at end of period		$3,027		$2,740		$2,396		$2,019

Notes 1 through 14 are an integral part of the financial statements.

TENNESSEE VALLEY AUTHORITY
NONPOWER PROGRAMS

STATEMENTS OF NET EXPENSE AND ACCUMULATED NET EXPENSE
For the Twelve Months Ended June 30, 1989 (unaudited), and the Years Ended September 30, 1988, 1987, and 1986

	June 30, 1989 (unaudited)	1988	1987	1986
		(Millions)		
NATURAL RESOURCES DEVELOPMENT				
Navigation operations	$ 12	$ 12	$ 12	$ 12
Flood hazard analysis	10	10	10	10
Recreation resources	9	9	9	8
Regional water management	4	4	4	5
Fisheries and wildlife resources development	1	1	1	2
Conservation of public lands and water	1	1	1	1
Environmental energy education	1	1	1	1
Agricultural resource development	3	4	4	4
Hardwood fuels research	2	3	3	4
Forest resources	1	2	2	2
Acidic deposition	1	1	—	—
Industrial skills development	2	3	3	4
Economic development and analysis	5	6	6	3
Navigation development and engineering assistance	1	(2)	4	1
Tennessee-Tombigbee waterway development	1	1	1	1
Special opportunities cities and counties program	1	2	5	3
Minority economic development	1	1	1	1
Floodplain management	2	2	2	2
Regional waste and water supply management	4	1	2	2
Land Between The Lakes operations	7	7	8	8
Valley mapping and remote sensing	1	1	1	1
Economic technical assistance	1	1	1	4
Other natural resources development projects	4	2	—	1
Net expense of natural resources development	75	73	81	80
FERTILIZER DEVELOPMENT; note 1				
Research and development				
Research and development	15	16	22	21
Loss on retirement of demonstration plant	—	—	30	—
Total research and development	15	16	52	21
Fertilizer technology introduction				
Fertilizer industry demonstrations	3	3	4	4
Farm test demonstrations outside the Valley	1	1	1	1
Product/process research and testing	3	5	4	5
Net expense of fertilizer technology development	7	9	9	10
Developmental production				
Cost of products distributed	28	31	34	27
General expenses				
Loss (Gain) on retirements of manufacturing plant and equipment, net	1	—	1	(1)
Gain on sale of phosphate reserves	—	(3)	(8)	—
Loss (Gain) on inventory decline	—	—	(4)	2
General and administrative	—	1	1	1
Other	(1)	(3)	(4)	(5)
Total general expenses	—	(5)	(14)	(3)
Total production expense	28	26	20	24
Less transfers and sales of products				
Transfers to other TVA programs, at market prices	18	17	12	10
Net expense of developmental production	10	9	8	14
Net expense of fertilizer development	32	34	69	45
OTHER EXPENSE, NET	4	4	4	1
NET EXPENSE	111	111	154	126
Accumulated net expense at beginning of period	1,968	1,892	1,738	1,612
Accumulated net expense at end of period	$2,079	$2,003	$1,892	$1,738

Notes 1 through 14 are an integral part of the financial statements.

TENNESSEE VALLEY AUTHORITY

STATEMENTS OF CASH FLOWS
For the Twelve Months Ended June 30, 1989 (unaudited), and Years Ended September 30, 1988, 1987, and 1986

	Power program				All programs			
	June 30, 1989 (unaudited)	1988	September 30 1987	1986	June 30, 1989 (unaudited)	1988	September 30 1987	1986
	(Millions)							
CASH FLOWS FROM OPERATING ACTIVITIES								
Net power income	$ 320	$ 413	$ 451	$ 274	$ 320	$ 413	$ 451	$ 274
Net expense of nonpower programs	—	—	—	—	(111)	(112)	(154)	(126)
Items not requiring (providing) cash; note follows	306	47	52	20	320	60	104	38
Changes in assets and liabilities								
Accounts receivable, net	(1)	2	(174)	(40)	—	8	(179)	(38)
Cumulative effect of accruing unbilled revenue	—	—	90	—	—	—	90	—
Inventories	39	80	(57)	51	36	80	(51)	52
Prepaid expenses	4	(5)	(31)	(33)	4	(4)	(31)	(33)
Accounts payable	421	(5)	47	100	399	(5)	48	100
Interest payable	(10)	30	6	13	(10)	30	6	13
Net cash provided by operating activities	1,079	562	384	385	958	470	284	280
CASH FLOWS FROM INVESTING ACTIVITIES								
Construction expenditures	(916)	(1,473)	(1,225)	(1,371)	(923)	(1,488)	(1,241)	(1,389)
Allowance for funds used during construction	282	525	523	543	282	525	523	543
Deferred nuclear recovery costs	(219)	(376)	(283)	—	(219)	(376)	(283)	—
Nuclear fuel	(34)	(31)	(249)	(98)	(34)	(31)	(249)	(98)
Canceled nuclear plant costs	(2)	(6)	(16)	(27)	(2)	(6)	(16)	(27)
Investments	705	(127)	(144)	(126)	705	(127)	(144)	(126)
Loans and other long-term receivables	24	5	(18)	8	30	8	(20)	4
Sale of assets	203	237	57	115	204	242	59	118
Recovery of canceled nuclear plant costs	7	8	11	24	7	8	11	24
Mine and mill development	5	1	(46)	(14)	5	1	(46)	(14)
Less: Depreciation charged to construction and other clearing accounts	(22)	(22)	(17)	(14)	(23)	(24)	(19)	(15)
Net cash used in investing activities	77	(1,215)	(1,373)	(932)	78	(1,220)	(1,387)	(950)
CASH FLOWS FROM FINANCING ACTIVITIES								
Long-term debt								
Issues	700	400	1,600	2,425	700	400	1,600	2,425
Redemptions	(500)	—	(745)	(1,400)	(500)	—	(745)	(1,400)
Debt defeased	(300)	—	—	—	(300)	—	—	
Short-term notes								
Issues	18,573	17,620	20,100	22,432	18,573	17,620	20,100	22,432
Redemptions	(18,383)	(17,275)	(19,891)	(22,861)	(18,383)	(17,275)	(19,891)	(22,861)
Costs of defeasance	(66)	—	—	—	(66)	—	—	
Borrowing expenses	—	—	(6)	(48)		—	(6)	(48)
Congressional appropriations and transfers	—	—	—	—	103	103	100	102
Payments to U.S. Treasury								
Return on appropriation investment	(68)	(69)	(74)	(86)	(68)	(69)	(74)	(86)
Repayment of appropriation investment	(20)	(20)	(20)	(20)	(20)	(20)	(20)	(20)
Net cash provided by financing activities	(64)	656	964	442	39	759	1,064	544
Net change in cash and cash equivalents	1,092	3	(25)	(105)	1,075	9	(39)	(126)
Cash and cash equivalents at beginning of year	40	7	32	137	156	86	125	251
Cash and cash equivalents at end of year	$ 1,132	$ 10	$ 7	$ 32	$ 1,231	$ 95	$ 86	$ 125
Supplemental information:								
New capital lease contracts	$ —	$ 4	$ 6	$ 185	$ —	$ 4	$ 6	$185
Interest paid (net of amount capitalized)	$ 1,213	$ 1,268	$ 1,220	$ 1,135	$ 1,213	$ 1,268	$ 1,220	$1,135

Notes 1 through 14 are an integral part of the financial statements.

TENNESSEE VALLEY AUTHORITY

STATEMENTS OF CASH FLOWS
For the Twelve Months Ended June 30, 1989 (unaudited), and the Years Ended September 30, 1988, 1987, and 1986

NOTE:

	Power program				Nonpower programs			
	June 30, 1989 (unaudited)	1988	September 30, 1987	1986	June 30, 1989 (unaudited)	1988	September 30, 1987	1986
	(Millions)							
Items not requiring (providing) cash								
Provision for depreciation	$ 335	$ 323	$ 313	$ 305	$14	$13	$18	$18
Amortization of loss on canceled nuclear units	232	245	217	226	—	—	—	—
Net loss (gain) on retirements and disposals of property, plant, and equipment	3	3	—	—	—	—	34	—
Abandonment of uranium properties	—	—	22	—	—	—	—	—
Cumulative effect of expensing energy conservation costs	—	—	77	—	—	—	—	—
Amortization of energy conservation cost	—	—	30	31	—	—	—	—
Amortization of deferred nuclear recovery costs	28	5	—	—	—	—	—	
Provision for lease payments	31	30	24	19	—	—	—	—
Provision for writeoff of uranium properties	22	22	16	16	—	—	—	—
Provision for reclamation and other costs of coal properties	5	5	16	3	—	—	—	—
Provision for decommissioning nuclear plants	42	38	33	28	—	—	—	—
Cumulative effect of accruing unbilled revenues	—	—	(90)	—	—	—	—	—
Reclassification of prior years' costs	—	—	(6)	—	—	—	—	—
Allowance for recovery of operating expense	(24)	(20)	(20)	(20)	—	—	—	—
Amortization of long-term debt discount and expense	5	6	7	2	—	—	—	—
Amortization of discount on decommissioning fund investments	(30)	(27)	(23)	(21)	—	—	—	—
Amortization of discount on bond retirement fund investments	(61)	(58)	(41)	(26)	—	—	—	—
Allowance for borrowed funds used during construction	(282)	(525)	(523)	(543)	—	—	—	—
	306	47	52	20	$14	$13	$52	$18
Add:								
Net power income	320	413	451	274				
Sale of assets	203	237	57	115				
Interest charges	1,858	1,823	1,749	1,691				
Net power proceeds (see note 9)	$2,687	$2,520	$2,309	$2,100				

Notes 1 through 14 are an integral part of the financial statements.

TENNESSEE VALLEY AUTHORITY

NOTES TO FINANCIAL STATEMENTS

The Tennessee Valley Authority is a wholly-owned corporation of the United States Government created by the Tennessee Valley Authority Act of 1933. The Tennessee Valley Authority was created for the purpose of maintaining and operating the properties owned by the United States in the vicinity of Muscle Shoals, Alabama, in the interest of the national defense and for agricultural and industrial development, and to improve navigation in the Tennessee River and to control the destructive flood waters in the Tennessee River and Mississippi River Basins.

All amounts relating to June 30, 1989 are unaudited, including notes applicable to the unaudited period.

1. *Summary of significant accounting policies*—Power accounts are kept in accordance with the uniform system of accounts prescribed by the Federal Energy Regulatory Commission.

Plant additions and retirements—Additions to plant are recorded at cost, which includes material, labor, overhead, and allowance for funds used. The costs of generation during preliminary operations prior to commercial acceptance, including amortization of nuclear fuel less credit for the fair value of energy generated, are also included in the recorded costs of steam and nuclear generating plants. Except for chemical plant, plant retirements (including original cost and removal cost less salvage) are charged against appropriate accumulated depreciation accounts.

Depreciation and depletion—Straight-line depreciation is provided for substantially on a composite basis. Rates of depreciation are derived from engineering studies of useful life and are reviewed each year. Depletion of coal land and landrights and phosphate land and mineral rights is provided on a unit of production basis. Composite rates applicable to each major class of plant as of June 30, 1989 (unaudited) is as follows: multipurpose dams, 1.09 percent; single-purpose dams, 1.89 percent; steam production plant, 3.04 percent; other electric plant, 2.96 percent; other plant, 2.30 percent; and nuclear plant, 2.94 percent.

Decommissioning—Provision for decommissioning costs of nuclear generating units is derived through engineering studies of useful life and estimated costs based on the dismantling/removal method. The cost estimates for decommissioning as provided in fiscal year 1988 were based on a current dollar value amounting to $105 million and $117 million per unit, respectively, for pressurized water and boiling water reactors. These rates were increased to $115 million and $150 million per unit, respectively, for pressurized water and boiling water reactors, effective October 1, 1988.

Allowance for funds used—The practice of capitalizing an allowance for funds used during construction is followed in the power program. In accordance with the TVA Board of Directors' criteria for establishing wholesale power rates, the allowance is applicable to construction in progress excluding generating facilities in a deferred status. The amount of interest capitalized is limited to the amount of depreciation and other noncash charges less the amount of the repayment of the appropriation investment to the U.S. Treasury. The method used provides for the monthly calculation of interest on debt equivalent to the average balance of construction work in progress. The interest is calculated on the most recent debt issues except for those representing refunding of existing debt, in which case the maturity date of the original issue is used.

Repairs and maintenance—The cost of current repairs and minor replacements is charged to appropriate operating expense and clearing accounts, and the cost of renewals and betterments is capitalized.

Nuclear fuel—The cost of nuclear fuel is charged to operations on a unit of production basis in amounts equal to lease payments (the cost of fuel burned plus finance charges) and a provision for spent nuclear fuel disposal.

Valuation of investments—Investments are recorded at amortized cost. Discounts are amortized at the yield rate over the life of each instrument.

Unamortized cost of canceled nuclear generating units—By action of the TVA Board of Directors, the unamortized cost of canceled nuclear generating units is being recovered through rates from customers and therefore is recorded as a deferred charge on the balance sheet. In accordance with the Board action, the amount of unamortized cost expensed was $245 million in 1988, $237 million for the twelve months ended June 30, 1989 (unaudited), and will be approximately $270 million each year from 1989 through 1995.

Deferred nuclear recovery costs—The costs incurred by TVA at the nonoperating nuclear production plants to accomplish the corrective actions necessary to obtain the Nuclear Regulatory Commission's approval to restart the plants are being deferred and will be charged to operations over a ten-year period beginning with the restart of each idled unit. The aggregate deferral at September 30, 1988, associated with the restart effort is $654 million and, at June 30, 1989 (unaudited), $726 million. Unit 2 at Sequoyah was returned to full commercial operation on July 18, 1988; amortization of the nuclear production plant recovery costs associated with the unit amounted to $5.0 million for fiscal year 1988. Unit 1 returned to service in January 1989. Amortization of the deferred costs on both units amounted to $28 million for the 12 months ended June 30, 1989 (unaudited).

Mine and mill development costs—Deferred mine and mill development costs are assigned to coal inventory and nuclear fuel on a unit of production basis determined in relation to estimated ore reserves. Each year the investment in uranium properties is evaluated to determine if any costs related to these properties may not be recovered from future operations. The balance of the estimated costs not recoverable from operations at September 30, 1988, approximately $44 million, will be amortized over the next two years.

Accounting changes—During fiscal 1987 TVA changed the accounting methods for recognition of operating revenues and energy conservation costs. Prior to fiscal 1987 revenues from the sale of electric energy were recorded only when billed on a cycle billing basis. Beginning in fiscal 1987, in order to more clearly match revenues and expenses, TVA began accruing revenues for services rendered but unbilled. The cumulative effect of this change as of October 1, 1986, of $90 million was included in operating revenues for fiscal 1987, the effect of which was to increase net income for fiscal 1987 by this amount. Prior to fiscal 1987, certain costs of the energy conservation program were deferred and charged to operations over a five-year period. Annual expenditures for this program now approximate the annual amortization of previously incurred costs. Since no significant impact on power rates would be realized through the continued deferral, TVA began expensing these costs as incurred in fiscal 1987. The cumulative effect of this change as of October 1, 1986, of $77 million was included in operating expenses for fiscal 1987, the effect of which was to decrease net income for fiscal 1987 by this amount. Since the combined effect of these two accounting changes was immaterial to the fiscal 1987 results of operations, they were not displayed separately in the statement of income for 1987. These changes in accounting methods are not expected to significantly affect annual operating results.

Statements of Cash Flows—In fiscal year 1988, TVA adopted the Statement of Financial Accounting Standards (SFAS) No. 95, "Statement of Cash Flows" which requires a Statement of Cash Flows as part of a full set of financial statements. As permitted by SFAS No. 95, Statements of Cash Flows have been presented for 1987 and 1986 in lieu of the Statements of Changes in Financial Position which were previously reported. For purposes of the Statements of Cash Flows, TVA considers the cash available in commercial bank accounts and U.S. Treasury accounts to be cash and cash equivalents. As of June 30, 1989 (unaudited), cash from the sale of investment funds is included on the Balance Sheet in other investment funds and temporary investments.

Borrowing expenses—Issue and reacquisition expenses and discounts on power borrowings from the public are amortized on a straight-line basis over the term of the related securities. Issue expenses

on power borrowings from the Federal Financing Bank are amortized over a five-year period except that amounts under six thousand dollars are expensed as incurred. Reacquisition expense of recalled debt is amortized over the remaining term of the recalled issues.

Sales of fertilizer—Sales of fertilizer materials are not made on a commercial basis, but are made to organizations collaborating in an experimental and educational program aimed at improving the manufacture, distribution, and use of fertilizers.

2. *Allocation of cost of multipurpose projects*—Section 14 of the TVA Act requires TVA's Board of Directors to allocate, subject to the approval of the President of the United States, the cost of completed multipurpose projects. The cost of facilities installed exclusively for a single purpose is assigned directly to that purpose; the cost of multiple-use facilities is allocated among the various purposes served.

The total investment of $1,473 million in completed multipurpose dams at September 30, 1988, and $1,480 million at June 30, 1989 (unaudited), is classified as follows:

	June 30, 1989 Investment			September 30, 1988 Investment		
	Direct	Multiple-use	Total	Direct	Multiple-use	Total
		(Unaudited)				
			(Millions)			
Power	$373	$220	$ 593	$366	$220	$ 586
Navigation	294	170	464	294	170	464
Flood control	65	193	258	65	193	258
Recreation	6	115	121	6	115	121
Local economic development	—	44	44	—	44	44
Total	$738	$742	$1,480	$731	$742	$1,473

3. *Nuclear power program*—At September 30, 1988, the nuclear power program included nine generating units—five completed, two under construction, and two in deferred construction status—at four plant sites. As of October 1, 1988, Watts Bar Unit Two was placed in a deferred status as described in this note. As of June 30, 1989, five generating units were completed, with one under construction and three in deferred construction status.

Nuclear production plant—Nuclear production plant consists of three units (1,152 megawatts each) at Browns Ferry (Alabama) and two units (1,221 megawatts each) at Sequoyah (Tennessee).

Sequoyah is a two-unit plant which was taken offline in August 1985 when questions were raised about the adequacy of the documentation for qualifying certain equipment for operations under emergency conditions. Sequoyah Unit Two was restarted in May 1988 and was returned to commercial operation in July 1988. Unit One was restarted in November 1988 and was returned to commercial operation in January 1989.

Plant and equipment expenditures at Sequoyah amounted to approximately $58 million for the twelve months ending June 30, 1989 (unaudited), and $68 million in fiscal 1988; deferred nuclear recovery costs for the twelve months ending June 30, 1989 (unaudited), and fiscal year 1988 were $37 million and $173 million, respectively. The undepreciated cost of Sequoyah at June 30, 1989 (unaudited), and at September 30, 1988, was $1.5 billion; depreciation charges for the twelve months ending June 30, 1989 (unaudited), and fiscal year 1988 were $53 million and $63 million respectively. The estimated useful life of the Sequoyah Plant was extended in fiscal 1989 from thirty to approximately

thirty-eight years based upon approval of an extended operating license; the change, effective October 1, 1988, will result in a reduction of approximately $16 million (unaudited) annual depreciation expenses.

Browns Ferry was taken offline in March 1985 for certain plant modifications and regulatory improvements. At September 30, 1988, the preliminary projected date for returning Unit Two to service was summer 1989; dates for returning Units One and Three to service have not been finalized. Fuel loading activities were completed in February 1989 at Browns Ferry Unit Two, which is currently projected to be returned to service during the first quarter of 1990. Dates for returning Units One and Three to service are currently under careful evaluation based on power need projections.

Plant and equipment expenditures for Browns Ferry amounted to approximately $118 million for the twelve months ended June 30, 1989 (unaudited), and $180 million in fiscal year 1988; deferred nuclear recovery costs were $149 million for the twelve months ended June 30, 1989 (unaudited), and $190 million for fiscal year 1988. Estimates to return all units to service are being examined. The undepreciated cost of Browns Ferry at June 30, 1989 (unaudited), is $840 million, and $873 million at September 30, 1988; construction in progress amounted to $628 million and $510 million respectively at June 30, 1989 (unaudited), and September 30, 1988. Aggregate annual depreciation charges of $17 million and annual interest charges on fuel in the reactor in the amount of $3 million for Units One and Two are effectively being deferred until future periods; annual depreciation charges of $28 million for Unit Three and common plant and related interest charges on fuel are being charged to operations.

Construction in progress—At September 30, 1988, nuclear plant construction in progress consisted of two units (1,270 megawatts each) at Watts Bar (Tennessee). However, construction on Unit Two, the investment in which was $1.6 billion at September 30, 1988, was reduced during fiscal year 1988 and officially suspended on or about October 1, 1988. The construction of this unit was suspended due to a reduction in the forecasted growth in demand for electric energy in the region. At June 30, 1989, nuclear plant construction in progress consisted of one unit (1,270 megawatts) at Watts Bar.

At September 30, 1988, construction at Watts Bar Unit One was substantially complete and Unit Two was approximately 88 percent complete; however, certain safety issues regarding the plant raised by construction and other TVA employees are being examined. While fuel loading did not occur as planned in 1986, 1987, or 1988, the preliminary projected date as of September 30, 1988, for loading fuel for Unit One is December 1990. Before the Nuclear Regulatory Commission will authorize TVA to load fuel and to begin low power testing for Unit One, these issues must be resolved. It is likely that capital expenditures will be required to resolve these issues and the amount of such expenditures is being reviewed. On or about October 1, 1988, construction of Unit Two ceased and the capitalization of additional costs, including interest, was discontinued pending the results of studies being conducted on projected electric energy demand.

TVA continues to capitalize interest on Unit One at Watts Bar, the investment in which was $4.0 billion at June 30, 1989 (unaudited), and $3.6 billion at September 30, 1988. Construction budgets, including capitalized interest, for fiscal years 1989 and 1990, are $601 million and $541 million, respectively. The total estimated project cost for Unit One and common plant is under review.

Deferred nuclear generating units—Construction at Bellefonte Unit Two (1,332 megawatts) ceased on or about October 1, 1985, and on Unit One (1,332 megawatts), July 1, 1988. The construction of these units was deferred due to a reduction in the forecasted growth in demand for electric energy in the region. The costs being incurred for the units are for the preservation of the current investment which is approximately $4.3 billion. Construction on Watts Bar Unit Two, in the amount $1.6 billion at June 30, 1989 (unaudited), and September 30, 1988, officially ceased on or about October 1, 1988. TVA ceased capitalizing interest on all units as of the dates when construction ceased.

Nuclear fuel—The cost of fuel for all nuclear plants, including those units in construction in progress and deferred, is recorded at $2,258 million at June 30, 1989 (unaudited), and $2,179 million at September 30, 1988. This cost is associated with each of the nuclear plant sites as follows:

	As of June 30, 1989 (Unaudited)	As of September 30, 1988
	(Millions)	
Sequoyah Units One and Two	$ 402	$ 450
Browns Ferry Units One, Two, and Three	434	418
Watts Bar Units One and Two	253	237
Bellefonte Units One and Two	341	325
Raw materials	828	749
	$2,258	$2,179

In addition to the amounts presented above, approximately $322 million and $342 million respectively was committed under contracts as of June 30, 1989 (unaudited), and September 30, 1988, for uranium and enrichment services. Such contracts expire no later than 2014.

The recovery of the costs associated with nuclear fuel is primarily dependent upon the completion and return to service of the nuclear generating units. At the present time, interest on fuel under the lease, including that in the reactors of certain nonoperative nuclear units, is being capitalized. If the nuclear fuel, as presently fabricated, is not used in the units intended, TVA will incur additional costs to enable this fuel to be used in other units or to prepare the fuel for sale.

Completion of nuclear power program—The timely return to service or completion of all nuclear generating units is subject to changes in future demand for electricity and is dependent upon receiving approvals from the Nuclear Regulatory Commission. TVA continues to study the need to return to service and to complete the nuclear generating units, and intends to recover the costs associated with these plants through rates charged to customers in the future. If abandonment of any of these units takes place, TVA would anticipate charging future customers for such costs; however, as in the past, TVA may elect not to recover all such costs from customers. Any significant nonrecovery of costs could result in the need for increased earnings in subsequent periods in order to issue bonds under certain provisions of the Power Bond Resolution.

The aggregate net assets at June 30, 1989, and September 30, 1988, associated with the nuclear power program are summarized as follows:

	Completed Plant		Construction in Progress		Total	
	June 30 1989	September 30 1988	June 30 1989	September 30 1988	June 30 1989	September 30 1988
	(Unaudited)		(Unaudited)		(Unaudited)	
			(Millions)			
Sequoyah Units 1-2	$1,512	$1,525	$ 152	$ 118	$1,664	$ 1,643
Browns Ferry Units 1-3	840	873	628	510	1,468	1,383
Watts Bar Unit 1	—	—	3,980	3,630	3,980	3,630
Watts Bar Unit 2	—	—	—	1,623	—	1,623
	$2,352	$2,398	$4,760	$5,881	7,112	8,279
Nuclear fuel-leased and owned					2,258	2,179
Unamortized cost of canceled nuclear generating units (note 6)					1,683	1,889
Sequoyah nuclear recovery costs					307	315
Browns Ferry nuclear recovery costs					407	331
Corporate nuclear recovery costs					12	8
Deferred generating units						
Bellefonte Units 1-2					4,261	4,260
Watts Bar Unit 2					1,623	—
Other					154	148
					$17,817	$17,409

4. *Expenditures for completed plant and construction projects*—Projected expenditures, as of June 30, 1989, including capitalized interest, for completed plant and construction projects, including nuclear, amount to $1.0 billion for fiscal year 1989, $1.0 and $1.2 billion for fiscal years 1990 and 1991, respectively. These budget estimates are reviewed and revised periodically to reflect changes in economic conditions and other factors considered in their determination. Substantial commitments have been incurred for these projects.

The cost of the North Alabama coal gasification project, approximately $115 million, is carried in completed plant. The project is in a Defense energy reserve status subject to an annual evaluation of the project's viability until 1991.

The construction required to complete the Columbia Dam and Reservoir, a multipurpose project financed by congressional appropriations, has been suspended due to budget restrictions and environmental concerns. Studies are being conducted to consider alternative uses of the land and facilities should the project not be completed.

5. *Leases*—Nuclear fuel is obtained directly from vendors and through contractual arrangements providing for mining, milling, and fabrication of raw materials obtained from land leased by TVA. Under an agreement entered into in fiscal 1980, TVA sells and leases back nuclear fuel on hand except for that prior to the milling stage or in a spent condition. TVA leases property, plant, and equipment under lease agreements with terms ranging from one to thirty years. Under most of the agreements, TVA pays the property taxes, maintenance costs, and other costs of operation. Many of the agreements are the result of sale-leaseback arrangements. Most of the agreements include purchase options and/or renewal options which cover substantially all the economic lives of the properties.

Capital lease amounts are reported on the balance sheet and new lease agreements are disclosed on the Statements of Cash Flow; rental expenses are recorded in accordance with the ratemaking process as provided by Statement of Financial Accounting Standards No. 71, "Accounting for the Effects of Certain Types of Regulation." The following analyses pertain to capital and noncancelable lease agreements in effect at June 30, 1989 (unaudited), and September 30, 1988 and 1987:

CAPITAL LEASES

	June 30	September 30	
	1989	1988	1987
	(Unaudited)	(Millions)	
Nuclear fuel	$2,255	$ 2,172	$1,831
General plant	262	265	261
Total properties under capital leases	2,517	2,437	2,092
Accumulated provision for amortization of capital leases	16	16	14
Net properties under capital leases	$2,501	$ 2,421	$2,078
Obligations under capital leases	$2,501	$ 2,421[a]	$2,078

FUTURE MINIMUM LEASE PAYMENTS

Fiscal Period	June 30, 1989		September 30, 1988	
	Capital Leases[b]	Noncancelable Operating Leases	Capital Leases[b]	Noncancelable Operating Leases
	(Unaudited)		(Millions)	
1989	$ 10	$ 2	$ 40	$ 7
1990	40	6	40	6
1991	40	5	40	5
1992	40	5	40	5
1993	40	5	40	4
Thereafter	635	10	635	9
Total future minimum lease payments	805	$33	835	$36
Less interest element included	559		586	
Present value of future minimum lease payments	$246		$249	

a. Includes payments due in 1989 of $3.676 million, excluding nuclear fuel.

b. Excludes payments under nuclear fuel lease, which are based on the cost of nuclear fuel burned and financial charge.

Amortization of capital leases, including nuclear fuel (1989 and 1988), for the twelve months ended June 30, 1989 (unaudited) and the years ended September 30, 1988, 1987, and 1986 was (in millions) $76, $21, $2, and $2, respectively. Operating expenses for the same respective periods included finance charges for capital leases in the amounts of (in millions) $63 (unaudited), $46, $45, and $28.

Annual rents for one capital lease range from $2.7 million to $51.9 million under the lease terms now in effect. TVA is providing for the levelization of these rentals in its operating expenses over the twenty-five year term of the lease which expires in 2011. The accumulated balance of the provision for these lease payments is $86.9 million at June 30, 1989 (unaudited), and $65.5 million at September 30, 1988.

Rentals for all operating leases have been charged to clearing accounts, portions of which are charged to operations, for the twelve months ended June 30, 1989 (unaudited), and the years ended September 30, 1988, 1987, and 1986, in the amounts of $9.6 million, $10.2 million, $8.7 million, and $8.6 million, respectively.

6. *Investment funds*—TVA has made investments of power funds beginning in 1982 to provide for the accumulation of funds required for retirement of bonds and cost of decommissioning nuclear plants. Deposits into the funds have been made based upon annual calculations of the fund requirements considering rates of return, inflation, and projections of decommissioning costs. As of September 30, 1984, the existing portfolio of investments, including amounts previously invested in the bond retirement fund, was dedicated to the decommissioning fund as a prudent financial management decision based upon projected decommissioning fund needs and the ability of the portfolio to meet them. Additional investments for the decommissioning fund will be determined in accordance with the factors above for existing and new generating units. The fund balance at June 30, 1989, was $247 million (unaudited) and at September 30, 1988, $233 million.

As of September 30, 1988, the bond retirement investment fund, beginning in October 1984, is being funded through deposits calculated to yield adequate funds to retire $4.6 billion of debt in 2002. The deposits were being made over a period of 11 years coinciding with the amortization schedule for canceled plant costs. The fund balance at September 30, 1988 was $689 million. In June 1989, the investments were sold and the proceeds used to effect the defeasance of debt as described in Note 10.

7. *Appropriation investment*—Changes in the appropriation investment during the years ended September 30, 1988 and 1987 were as follows:

	Power program		All programs	
	1988	1987	1988	1987
			(Millions)	
Congressional appropriations and transfers of property from other Federal agencies (net)	$ —	$ —	$ 103	$ 100
Less repayments to General Fund of the U.S. Treasury	20	20	20	20
Increase or decrease for the period	(20)	(20)	83	80
Balance, beginning of period	788	808	3,855	3,775
Balance, end of period	$768	$788	$3,938	$3,855

Congressional appropriations for fiscal year 1989 in the amount of $103 million were received under Public Law 100-371, increasing the all programs balance to $4,042 million (unaudited).

8. *Power production*—Purchased and interchange power costs increased from approximately $242 million in 1986 to $285 million in 1987 and $339 million in 1988 due to the continued low rainfall experienced in the region and the continued shutdown of the nuclear generating units. These costs were $171 million (unaudited) in the twelve months ended June 30, 1989, reflecting increased rainfall and the operation of the Sequoyah nuclear units. Operations and maintenance expenses for the nuclear plants increased from $265 million in 1986 to $377 million in 1987 and decreased to $347 million in 1988. Approximately $1.8 billion (unaudited) and $2.7 billion in long-term commitments for the purchase of coal to provide for the fuel requirements of the steam generating plants were outstanding at June 30, 1989, and September 30, 1988, respectively.

9. *Payments to the U.S. Treasury*—Section 15d of the TVA Act requires the payment from net power proceeds of a return on the net appropriation investment in power facilities plus repayments of such investment, beginning with fiscal year 1961. The amount of return payable during each year is based on the appropriation investment as of the beginning of that year and the computed average interest rate payable by the U.S. Treasury on its total marketable public obligations as of the same date. The repayment schedule calls for payment of not less than $10 million for each of the first five years (1961-1965), $15 million for each of the next five years (1966-1970), and $20 million for each year thereafter until a total of $1 billion shall have been repaid. The payments required by Section 15d may be deferred under certain circumstances for not more than two years.

Required payments have been made as follows:

	Return	Repayment	Total
		(Millions)	
Total to September 30, 1987	$1,765	$470	$2,235
Year ended September 30, 1988	69	20	89
	$1,834	$490	$2,324

For fiscal year 1989 the required payments, payable September 30, 1989, will be $67 million as a return on the appropriation investment at the computed average interest rate of 8.770 percent, and $20 million as a repayment, a total of $87 million. Accruals aggregating $65 million have been provided for these payments as of June 30, 1989 (unaudited).

In addition to the payments from net power proceeds, certain nonpower proceeds are paid to the U.S. Treasury under the provisions of Section 26 of the TVA Act. During fiscal year 1988, payments of $181 thousand were made, bringing the total payments from nonpower proceeds to $42.3 million; an additional payment of $201 thousand (unaudited) was made in March 1989.

Prior to 1961, under then existing legislation, TVA paid to the Treasury $185.1 million of power proceeds. In addition to the repayments, $65.1 million of bonds sold to the Treasury and Reconstruction Finance Corporation in fiscal years 1939-1941 have been fully repaid from power proceeds. Section 26 of the TVA Act provides for annual payments to the Treasury of any power or nonpower proceeds not needed for the operation of dams and reservoirs, the conduct of the power program, and the manufacture and distribution of fertilizers.

10. *Borrowing authority*—Section 15d of the TVA Act authorizes TVA to issue bonds, notes, and other evidences of indebtedness up to a total of $30 billion outstanding at any one time to assist in financing its power program. Debt service on these obligations, which is payable solely from TVA's net power proceeds, has precedence over the payment to the U.S. Treasury described in note 9. Issues outstanding on June 30, 1989, and September 30, 1988, consist of the following:

		June 30, 1989 (unaudited)	September 30, 1988
		(Millions)	
Long-term debt			
Held by the public			
5.70%	1967 Series A, due May 15, 1992	$ 70	$ 70
6.375%	1967 Series B, due November 1, 1992	60	60
7.30%	1971 Series B, due October 1, 1996	150	150
7%	1972 Series A, due January 1, 1997	150	150
7.35%	1972 Series B, due May 1, 1997	150	150
7.35%	1972 Series C, due July 1, 1997	150	150
7.40%	1972 Series D, due October 1, 1997	150	150
7.35%	1973 Series A, due January 1, 1998	100	100
7.35%	1973 Series B, due April 1, 1998	150	150
7.75%	1973 Series C, due July 1, 1998	150	150
7.70%	1973 Series D, due October 1, 1998	100	100
		1,380	1,380
Federal Financing Bank			
7.97%	1976 Series B, due November 30, 2001	400	400
7.625%	1976 Series C, due January 31, 2002	200	200
7.975%	1977 Series A, due February 28, 2002	300	300
7.935%	1977 Series B, due May 31, 2002	400	400
8%	1977 Series C, due October 31, 2002	400	400
8.375%	1978 Series A, due January 31, 2003	400	400
9.195%	1979 Series C, due August 31, 2004	500	500
10.545%	1979 Series D, due October 31, 2004	400	400

		June 30, 1989 (unaudited)	September 30, 1988
		(Millions)	
11.225%	1980 Series A, due January 31, 2005	500	500
12.955%	1980 Series B, due March 31, 2005	500	500
10.475%	1980 Series C, due June 30, 2005	500	500
10.890%	1980 Series D, due August 31, 2005	500	500
12.425%	1980 Series E, due November 30, 2005	500	500
12.735%	1981 Series A, due March 31, 2011	500	500
12.925%	1981 Series B, due April 30, 2011	500	500
13.255%	1981 Series C, due June 30, 2011	500	500
14.905%	1981 Series D, due September 30, 2011	—	300
13.035%	1981 Series E, due December 31, 2011	650	650
13.565%	1982 Series A, due April 30, 2012	700	700
13.575%	1982 Series B, due May 31, 2012	300	300
14.125%	1982 Series C, due July 31, 2012	350	350
11.945%	1982 Series D, due September 30, 2012	100	100
10.725%	1982 Series E, due November 30, 2012	200	200
10.575%	1983 Series A, due January 31, 2013	150	150
10.575%	1983 Series B, due March 31, 2013	150	150
10.425%	1983 Series C, due May 31, 2013	100	100
11.685%	1983 Series D, due August 31, 2013	250	250
11.905%	1983 Series E, due January 31, 2014	150	150
12.055%	1984 Series A, due January 31, 2014	100	100
11.695%	1985 Series A, due January 31, 2015	100	100
12.095%	1985 Series B, due March 31, 2015	150	150
10.945%	1985 Series C, due May 31, 2015	150	150
10.725%	1985 Series D, due July 31, 2015	500	500
10.705%	1985 Series E, due September 30, 2015	200	200
9.685%	1986 Series A, due February 29, 2016	150	150
7.285%	1986 Series B, due April 30, 2016	600	600
7.825%	1986 Series C, due June 30, 2016	600	600
7.315%	1986 Series D, due August 31, 2016	900	900
7.765%	1986 Series E, due September 30, 2016	175	175
7.575%	1986 Series F, due November 30, 2016	200	200
7.495%	1987 Series A, due January 31, 2017	200	200
7.935%	1987 Series B, due April 30, 2017	200	200
8.755%	1987 Series C, due November 17, 2003	500	500
8.945%	1987 Series D, due February 17, 2003	200	200
9.565%	1987 Series E, due May 15, 2003	300	300
8.535%	1988 Series A, due May 17, 2004	200	200
9.280%	1988 Series B, due November 15, 2002	200	200
9.377%	1989 Series A, due August 16, 2004	700	—
		16,425	16,025
	Total long-term debt	17,805	17,405

	June 30, 1989 (unaudited)	September 30, 1988
	(Millions)	
Short-term debt		
U.S. Treasury	150	150
Federal Financing Bank	615	606
Total short-term debt	765	756
Current maturities of long-term debt (9.296%, 1979 Series A, due February 28, 1989)	—	500
	$18,570	$18,661

The interest rate on short-term debt owed to U.S. Treasury as of September 30, 1988, was 7.125 percent and, at June 30, 1989, 9.0 percent (unaudited); the average rate on short-term debt outstanding with the Federal Financing Bank as of September 30, 1988, was 7.59 percent; and, at June 30, 1989, 8.43 percent (unaudited).

During fiscal years 1988, 1987, and 1986, the maximum amounts of short-term borrowings outstanding (in millions) were $756, $1,076, and $930, respectively, and the average amounts (and weighted average interest rates) of such borrowings were approximately (in millions) $604 (6.6 percent), $669 million (5.9 percent), and $628 (7.0 percent), respectively.

The maximum amount of short-term borrowings outstanding during the twelve months ended June 30, 1989 (unaudited), was $1,165 million, with an average issue amount of $137 million at interest rates ranging from 6.75 percent to 9.495 percent.

In June 1989 (unaudited), TVA sold its Bond Retirement Fund investments. The proceeds received from this transaction were used to advance refund the following debt issues:

Issue	Amount	Interest Rate	Maturity Date
	(Millions)		
1981 Series D	$300	14.905%	September 30, 2011
1982 Series C	$350	14.125%	July 31, 2012
1982 Series B (50 percent)	$150	13.575%	May 31, 2012

Pursuant to the refunding plan, funds in the amount of (in millions) $377, $455, and $184 were deposited in three separate irrevocable trusts on July 3, July 6, and July 7, respectively. These funds were invested in securities that are direct obligations of or unconditionally guaranteed by the United States of America, and which are scheduled to earn interest and mature in amounts sufficient to meet all debt service requirements for the aforementioned debt issues through their earliest call dates of September 30, 1991, July 31, 1992, and May 31, 1992, respectively. Funds placed in the trust included $34 million in accrued interest.

These irrevocable trusts, and the aforementioned three debt issues, will not be included on the balance sheet of TVA. At June 30, 1989, the 1981 Series D issue defeasance had been executed. The 1981 Series D issue was removed from the balance sheet at June 30, 1989 and the liability to the trust is included in accounts payable. Included in temporary investments at June 30, 1989 (unaudited) is $377 million which was deposited on July 3 to complete the defeasance of the 1981 Series D issue. Included in other investments at June 30, 1989 (unaudited) is $590 million which, along with $49 million in cash, was used to complete the defeasance transactions for the 1982 Series C issue on July 6 and the 1982 Series B issue on July 7.

TVA paid the following amounts in excess of outstanding debt to effect the advance refunding of the three debt issues: 1981 Series D, $66 million; 1982 Series C, $84 million; 1982 Series B, $32 million, for a total of $182 million. Also, TVA realized a gain of $151 million upon the sale of the

investments in the Bond Retirement Fund. As of June 30, 1989 (unaudited) included in other deferred charges is the gain realized on the sale of investments and the amounts in excess of outstanding debt related to the defeasance of the 1981 Series D bond. The aggregate cost of the amounts in excess of outstanding debt upon the completion of the defeasance transactions, less the aforementioned gain, or a net amount of $31 million will be deferred and recognized as an expense ratably through the maturity dates of the debt issues.

11. *Retirement plan*—TVA's retirement plan is a contributory, defined benefit plan covering most full-time employees. The plan is comprised of two funds: Fixed Benefit Fund and Variable Annuity Fund. Plan assets are primarily stocks, bonds, and real estate. TVA contributes to the Fixed Benefit Fund such amounts as are necessary on an actuarial basis to provide assets sufficient to meet the obligations for benefits to be paid to members. A member elects to have the member's current contributions credited to the Fixed Benefit Fund or the Variable Annuity Fund or a portion to each. The pension is based on the member's years (to the nearest month) of creditable service, average base pay for the highest three consecutive years, and the pension rate for the member's age, less a Social Security offset.

Effective October 1, 1987, TVA adopted the provisions of Statement of Financial Accounting Standards No. 87—"Employer's Accounting for Pensions." The effect of adopting these standards was to reduce 1988 pension costs by approximately $6.0 million. The new standards have been adopted prospectively, and pension costs for previous years have not been restated. Pension costs for 1987 and 1986 were $86.1 million and $78.2 million, respectively. Net pension costs for 1988 include the following components:

	Fiscal Year 1989 (Estimated) (unaudited)	Fiscal Year 1988
	(Millions)	
Service cost	$ 69	$ 84
Interest cost on projected benefit obligation	194	174
Actual return on assets	(188)	(52)
Net amortization and deferral	(1)	(117)
Net pension costs	$ 74	$ 89

The plan's funded status is as follows:

	At September 30	
	1987	1988
	(Millions)	
Actuarial present value of benefit obligations:		
Vested benefit obligation	$(1,725)	$(2,005)
Nonvested benefits	(87)	(52)
Accumulated benefit obligation	(1,812)	(2,057)
Effects of projected future compensation levels	(401)	(427)
Projected benefit obligation	(2,213)	(2,484)
Plan assets at fair value	2,209	2,261
Excess of projected benefit obligation over plan assets	(4)	(223)
Unrecognized net loss		225
Unrecognized net obligation being amortized over 15 years beginning October 1, 1987	4	4
Prepaid pension cost	$ —	$ 6

The actuarial data as of June 30, 1989 is unavailable; no significant changes are known to have occurred which would affect the liability.

For determining the actuarial present value of the projected benefit obligation in fiscal years 1987 and 1988, discount rates of 8 percent and 8.5 percent respectively, were used, and the assumed annual rates of increase in future compensation levels for 1987 and 1988 ranged from 3.3 percent to 8.3 percent. The expected long-term rate of return on plan assets for 1987 and 1988 was 9 percent.

12. *Nuclear insurance*—Under the Price-Anderson Act of 1954, as amended (the Act), TVA maintains for each operating nuclear plant a two-layer combination of private insurance and industry-wide self-insurance which protects TVA up to the Act's maximum aggregate liability of $7.445 billion per nuclear incident at June 30, 1989 (unaudited), and $7.216 billion at September 30, 1988. This protection covers liability for bodily injury, death, and loss of or damage to property located off the plant site. The first layer is private insurance, with a limit of $200 million (unaudited) at June 30, 1989, and $160 million at September 30, 1988. The second layer, $7.245 billion (unaudited) at June 30, 1989, and $7.056 billion at September 30, 1988, is a program of self-insurance in which each nuclear reactor owner could be retrospectively assessed, for each of its operational nuclear units, an amount not to exceed $63 million per each nuclear incident, but subject to a maximum annual assessment of $10 million. Any amount in excess of $10 million in any year would be carried forward until fully paid. Because of legal defense costs, if the sum of all public liability and legal costs arising from any nuclear incident exceeds the maximum amount of financial protection, each reactor operator can be assessed an additional 5 percent of the $63 million assessment ($3.15 million) per unit. Based on the number of operating nuclear units presently in service, TVA would be subject to a maximum assessment of $315 million in any calendar year plus $15.75 million for legal defense costs if the maximum financial protection becomes exhausted.

TVA is a member of Nuclear Mutual Limited (NML) which provides nuclear property insurance for the Browns Ferry Nuclear Plant for losses up to $500 million. This insurance may require the payment of a retrospective premium of up to approximately $34 million at September 30, 1988 and $35.5 million at June 30, 1989 (unaudited) in the event that losses by NML members exceed its available funds. Property insurance up to $500 million is also maintained for the Sequoyah Nuclear Plant, but is not subject to retrospective assessments.

TVA is also a member of Nuclear Electric Insurance Limited (NEIL), which provides nuclear property insurance for property damage to member nuclear plants in excess of $500 million. TVA presently insures all of its operating nuclear plants with NEIL for $775 million at September 30, 1988 and $560 million at June 30, 1989 (unaudited) and is subject to a maximum assessment of approximately $19 million in the event losses by NEIL members exceed its available funds.

13. *Major customers*—Sales of electric power to one Federal agency—principally in the form of demand charges—has amounted to 10 percent in fiscal years 1986 through 1988. This customer, in accordance with contract provisions, had exercised its right prior to fiscal year 1987, through notices eight years in advance, to reduce the amount of electric power to be purchased by 1000 megawatts each year beginning in December 1989, until reaching a contract demand of 485 megawatts from December 1992 until contract expiration in 1994. The customer also began withholding payments of portions of its monthly power bills in June 1987. As discussed in Note 14 of the 1987 report, an agreement between TVA and the customer was reached in December 1987, after TVA filed suit, whereby the customer's payment obligations are being satisfied through a series of payments to TVA totaling over $1.8 billion. The scheduled payments are $375 million, received in fiscal year 1988, $465 million in fiscal year 1989, $311 million in fiscal 1990, and $160 million each year from 1991

through 1994, the end of the contract term. TVA will also receive payment for its obligation under the agreement to deliver up to 125 megawatts of power. The reductions in demand have been taken into account in TVA's future supply plans.

14. *Litigation*—TVA employees are specifically subject to the Federal Employees' Compensation Act with respect to on-the-job injuries. That statute has an exclusive remedy provision, which injured employees often attempt to avoid by bringing suit against a coworker for allegedly negligently causing the injury. Since TVA has an administrative policy of defending its employees, at TVA's own cost, against suits brought against them for actions or omissions taken in the course of employment, and paying any resulting judgments, such suits can lead to double recovery against TVA, a result which the statute prohibits. A growing number of such suits have been brought in recent years. TVA has tried to limit their impact in a number of ways, including the waiver of such suits as a condition for TVA's defense of work-related suits, and the aggressive defense of sued employees on various legal grounds. The courts have been reaching differing conclusions on the issues raised, and no single definitive decision has been issued. In most of the cases which have gone to final judgment, TVA has prevailed either on the law or the facts. Following the Supreme Court's decision in the non-TVA suit mentioned last year, Congress passed a statute immunizing TVA and other Federal employees from nonconstitutional tort suits on account of acts or omissions within the scope of employment, and making TVA the sole defendant to such a suit involving a TVA employee. Several cases involving TVA employees are pending in the Eleventh Circuit Court of Appeals and the district court in Alabama which should be resolved by the new statute, which applies to pending cases.

A contractor has sued several companies and individuals, including the Manager of Nuclear Power, on a number of contract-related theories, claiming $88 million in damages. Although TVA is not a party, TVA has contracted to defend and indemnify the defendants for such suits, and is defending the case. Defendants' motion for summary judgment is pending.

A former employee sued TVA, the Board, the Inspector General, and an attorney working for the Board, alleging that a legal opinion released to the public by TVA defamed him and violated various claimed statutory, common law, and constitutional rights. The employee had been the Executive Secretary and a member of the Board of Directors of the TVA Retirement System. The suit seeks $7 million in damages. All claims except for an alleged violation of the Privacy Act by TVA have been dismissed by the district court.

Shortly before the end of fiscal year 1988, a suit challenging the constitutionality of the Office of Nuclear Power's random drug testing program was filed. The plaintiff also claimed sex discrimination and seeks monetary and other relief.

Two cases are pending involving TVA's electric rates. In one of the cases, an industrial customer of a municipal distributor of TVA power seeks to recover from TVA for damages allegedly incurred when the customer's plant processes froze during a power outage occurring during an undue cold snap. In the other case, a former employee of a different municipal distributor sued TVA, the distributor, and the employee's former supervisor about alleged overcharges, faulty accounting practices, and overly large reserve accounts.

It is the opinion of TVA counsel that although the outcome of this and other litigation cannot be predicted with any certainty, the ultimate outcome should not have any material adverse effect on TVA's financial position.